



PUBLIC AFFAIRS

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
1400 DEFENSE PENTAGON
WASHINGTON, DC 20301-1400

31 MAY 1996

Ref: 93-F-1875

Mr. Hans M. Kristensen
GREENPEACE
1436 U Street NW
Washington, D. C. 20009

Dear Mr. Kristensen:

This letter and documents respond to your August 16, 1993, Freedom of Information Act (FOIA) request received in this Directorate on August 20, 1993.

Your request and responsive documents were referred to the Defense Intelligence Agency (DIA) for a direct response to you on November 16, 1994. DIA has reviewed and returned the documents to this Directorate for a response to you.

The assessable fees are waived in this instance.

Sincerely,

A. H. Passarella
Director
Freedom of Information
and Security Review

Enclosures:
As stated



CX-2650-67

15 September 1967

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MEMORANDUM FOR THE SECRETARY OF DEFENSE

Subject: ROLLING THUNDER Targeting (U)

1. (C) The Basic Encyclopedia of military targets in North Vietnam provides the common basic targeting data for development of an operating target list.

2. (S) The operating target list, known as the ROLLING THUNDER Target List (RTTL), is by no means all-inclusive, but rather it represents a current group of targets selected for strike, restrike, proposal for approval to strike, or requiring monitoring for additional intelligence collection regarding value, regeneration, or reconstitution. The targets selected are determined by intelligence data made available from all sources and from information and judgments provided by CINCPAC, his component commanders, their subordinate commanders, DIA, or the Joint Staff.

3. (S) CINCPAC is tasked to produce and publish the ROLLING THUNDER Target List. In May 1967, CINCPAC automated his data base that previously had been maintained manually. A printout of this data has been updated weekly to reflect changes occurring as a result of the targeting process. Recently, the procedure was revised to provide for a bi-weekly printout, with interim changes accomplished by message to all concerned.

4. (S) CINCPAC separates targets selected from the common data base into four basic categories by status, as follows:

a. Authorized priority targets - a listing of validated targets that can be struck without additional approval;

b. Unauthorized priority targets - validated targets that require special approval from higher authority. These targets constitute CINCPAC's recommendations for approval and are considered for inclusion in the ROLLING THUNDER proposal.

02A JSC 94-16
CONTROLLER DOCUMENT
CERTIFICATE OF DESTRUCTION REQUIRED
CY 121

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T.S. No.	94-TS-304
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Joint Staff
11 APR 96 93-F-1875
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Doc 1

c. Additional targets under consideration for inclusion in the first or second category;

d. Unserviceable or inactive targets previously in category one, two, or three. May be returned to a higher category, if warranted.

5. ~~(8)~~ Targets move continuously among, from, and into the four basic categories.

a. New intelligence information may upgrade or degrade the status of targets;

b. A newly discovered target might enter the list in any of the first three categories;

c. Strike damage on one target may affect the status of others. For example, destruction of a primary bridge might elevate the importance of an alternate route or bypass crossing;

d. Reconstitution of targets by the NVN tends to move targets into higher categories;

e. Cumulative damage accrued within a target system tends to upgrade the significance of less important elements of that system. For example, small capacity POL storage areas, transshipment points, power plants, and secondary and tertiary LOC targets assume added importance when primary elements of the systems are destroyed. Such targets enter the list one of the first three categories, regardless of capacity or quantities;

f. Targets destroyed, abandoned, or dismantled with no evidence of reconstitution or regeneration are removed from the current list.

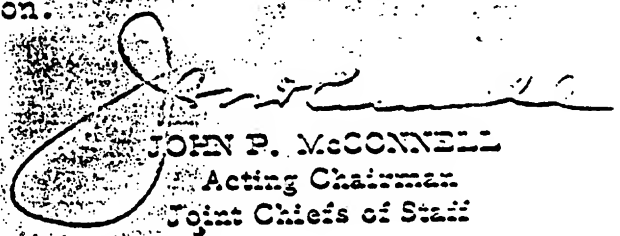
6. ~~(8)~~ As the current printout of the ROLLING THUNDER target list is received, the Joint Staff prepares a spread sheet of only the unauthorized priority targets requiring approval of higher authority with an assessment of their appropriateness for recommendation in ROLLING THUNDER program packages.

7. (S) The first spread sheet was prepared with an as of date of 9 August 1967. From the ROLLING THUNDER Target List, current on that date, there were 427 targets, of which 111 were unauthorized. The Joint Chiefs of Staff considered 70 of these targets to be appropriate for recommendation and 41 targets should be deferred at that time.

8. (S) Since 9 August 1967, there has been a weekly revision to the ROLLING THUNDER Target List. The statistical summary of targets provided by memorandum on 11 September 1967, reflected a total of 461 targets on the current target list as of 6 September 1967.

9. (S) Enclosure A is a statistical summary of changes between the 9 August and the 6 September 1967 target list. Enclosure B reflects the targets added to the original 9 August 1967 target list, and the reason for the addition to the current operating list. Enclosure C reflects the targets deleted since 9 August 1967, and the reasons for the deletion.

10. (S) As additional information, Enclosure D identifies the original 70 targets from the 9 August 1967 operating list and the changes that have occurred to these targets since that date. There are now 30 of the original 70 targets that have not been authorized for strike. These 30 targets, in addition to other targets, are on the current unauthorized priority list of 104 targets, of which 65 are assessed by the Joint Staff as valid targets under current operational concepts. Only targets contained in the proposed ROLLING THUNDER package are recommended by the JCS for your approval. Twenty-eight of these targets are contained in ROLLING THUNDER 57 Addendum IV that is ready for your consideration.


JOHN P. McCONNELL
Acting Chairman
Joint Chiefs of Staff

Attachments

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ENCLOSURE A

SUMMARY OF CHANGES

COMPARISON BETWEEN 9 AUGUST 1967
AND CURRENT (6 SEPTEMBER 1967) NVN OPERATING TARGET LISTS

Targets on 9 August 1967 list ----- 427

CHANGES TO THE NVN OPERATING TARGET LIST

	<u>ADDED</u>	<u>DELETED</u>	
Authorized Priority Targets	11	0	
Unauthorized Priority Targets	25	0	
Additional Targets Under Consideration	0	0	
Unserviceable or Inactive Targets	0	2	
Total Added (see list at Encl B)	36		+36
Total Deleted (see list at Encl C)		2	- 2
Targets on 6 September 1967 list -----			461

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Enclosure A

LIST OF ADDED TARGETS (7)

TARGETS ON CURRENT (6 September 1967) NVN
OPERATING TARGET LIST THAT WERE NOT ON
THE 9 AUGUST 1967 LIST

JCS/RR TUT #	NAME	REASON
615-0610	Cam Pha POL	Element of JCS #61
616-0004	Haiphong Naval Base	Element of JCS #70
616-0034	Lao Cai RR Yd	Increased significance based on recent
616-0039	Dap Can RR Yd	approval of Buffer targets. Increased significance based on emphasis
616-0040	Dap Cau RR Spur	to isolate Hanoi. Increased significance based on emphasis
616-0054	Haiphong Shipyard 3	to isolate Hanoi. Element of JCS #70
616-0156	Haiphong BSA Se Ca	storage. Recent photography shows use for missile
616-0257	Hanoi BSA NE 61a	storage. Increased significance for defense of strike force.
616-0265	Lang Yang RR Pr	approved. Expanded to include entire barracks. Missile storage element of target previously
616-0322	Kinh Ho RR Yd	approval of Buffer targets. Increased significance based on recent
616-0524	Long Lau RR Pr	Suitable for WALLEYE. Recent photography shows new construction.
616-0671	Haiphong Shipyard 4	Element of JCS #70
616-0672	Haiphong Shipyard 1	Element of JCS #70
616-0673	Haiphong Shipyard 2	Element of JCS #70
616-0750	Yen Vien RR Yd H	Newly designated target on NE rail line.
616-0901	Haiphong Warehouse Fort	Increased significance based on emphasis to isolate Hanoi.
616-0922	Hanoi Machinery Gls	warehouse. Recent intelligence shows use as major
616-1033	Haiphong Warehouse	major warehouse. Recently validated as significant small
616-1223	Hai Duong Bku H	AAA units. Increased significance for defense of strike force.
616-1827	Lang Yang RR Yd	approval of Buffer targets. Increased significance based on recent
616-1831	Trat Van RR Siding	approval of Buffer target. Increased significance based on recent
616-2088	Haiphong Shipyard W	Element of JCS #70
616-2140	Haiphong Shipyard N	Element of JCS #70
616-2282	Dong Muc RR Pr	On recently completed dual gage NE rail line.
616-3370	Hao Loan Boat Yd	intelligence showing increased use of water transport.
616-3373	Haiphong Shipyard Vinh	construction. Recent intelligence shows active barge
616-3424	Tien Hong POL Stor	transshipment point. Recent photography shows principal POL
616-3503	Co Phuc Barge Yd	to isolate Haiphong. Increased significance based on emphasis
616-3506	Thuy Phuong Barge Yd	intelligence showing increased use of water transport.
616-3547	Trung Quan RR Yd	Recently constructed alternate rail yard.
616-3550	Lue Hong POL Stor	transshipment point. Recent photography shows principal POL
616-3757	Lang Son RR Yd RR	of NE rail line. Newly discovered target on bypass section
616-3759	Ha Dong Boat Yd	craft construction. Newly discovered target engaged in small
616-3758	Gie Thuang Ferry Yard	steel barges into rail ferries. Recent intelligence shows yard now converting
616-3773	Dan Nhin POL Tank Fab	and drum fabrication. Newly discovered target engaged in POL tank
616-3777	Xom Trat Boat Yd	intelligence showing increased use of water transport.

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ENCLOSURE C

LIST OF DELETED TARGETS (2)

TARGETS ON 9 AUGUST 1967 NVN
OPERATING TARGET LIST THAT ARE NOT
ON THE CURRENT (6 September 1967) LIST

JCS/BE
TIT #

NAME

REASON

616-0912 Kinh Ho Voh Repair

Combined with 616-3241

616-2196 Hanoi RA Br

Bypass; combined with JCS #13

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Enclosure C

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ENCLOSURE D

STATUS OF UNAUTHORIZED TARGETS RECOMMENDED BY JCS ON
3 AUGUST 1967 NON OPERATING TARGET LIST (70)

TTT #	NAME	STATUS	REMARKS
18.26	Long Con RR Br NW	Auth	RT 57 17 Aug
18.59	Long Khup Hwy Br	Auth	RT 57 17 Aug
18.65	On Hwy Br	Auth	RT 57 17 Aug
18.67	Chieng Chuang Hwy Br	Auth	RT 57 17 Aug
18.71	Lac Binh Hwy Br	Auth	RT 57 5 Sep
48	Haliphong POL	Auth	RT 57 5 Sep
62	Van Dien Supply Dpo	Auth	RT 57 19 Aug
63.11	Van Dien Veh Dpo	Auth	RT 57 17 Aug
68	Com MIA Port	Auth	RT 57 5 Sep
69	Hon Gai Port	Auth	RT 57 5 Sep
82.24	Hanoi Transformer	Auth	RT 57 17 Aug
616-0002	Haliphong RR/Hwy Br	Auth	RT 57 30 Aug
616-0035	Thut Kho Hwy Br	Auth	RT 57 17 Aug
616-0036	Cho Bang Hwy Br N	Auth	RT 57 17 Aug
616-0048	Cho Bang Hwy Br S	Auth	RT 57 30 Aug
616-0067	Haliphong RR Yd W	Auth	RT 57 30 Aug
616-0068	Haliphong Hwy Br	Auth	RT 57 30 Aug
616-0070	Haliphong Hwy Br SSE	Auth	RT 57 30 Aug
616-0085	Kien An Hwy Br	Auth	RT 57 30 Aug
616-0094	Haliphong Warehouse W	Auth	RT 57 5 Sep
616-0302	Hanoi Stor Gln	Auth	RT 57 5 Sep
616-0385	Ban Muc Uka/Ator	Auth	RT 57 17 Aug
616-0698	Hanoi Stor Bac Mai	Auth	RT 57 5 Sep
616-0709	Phu Lo RR Br	Auth	RT 57 5 Sep
616-0913	Kinh Ho Veh Maint	Auth	RT 57 19 Aug
616-1049	Ke Sat Hwy Br	Auth	RT 57 17 Aug
616-2356	Hanoi Veh Dpo Giap NW	Auth	Combined with 616-3252
616-3241	Kinh Ho Veh Repair	Auth	RT 57 17 Aug
616-3252	Hanoi Veh Dpo	Auth	RT 57 5 Sep
616-3548	Lai Dong Transship E	Auth	RT 57 5 Sep
616-M2152	Men Dong RR Spur W	Auth	RT 57 5 Sep (Now 616-3742)
3	Gia Lam AP	Unauth	Proposed RT 57 ADD IV
6	Phuc Yen AP	Unauth	Proposed RT 57 ADD IV
7	Bac Mai AP	Unauth	Proposed RT 57 ADD IV
8	Canh Mi AP	Unauth	Proposed RT 57 ADD IV
21	Hanoi RR Yd/Shops	Unauth	
58	Hanoi Supply Dpo S	Unauth	Proposed RT 57 ADD IV
59	Hanoi Supply Dpo N	Unauth	Proposed RT 57 ADD IV
70	Haliphong Port	Unauth	Elements in Proposed RT 57 ADD IV
616-0030	Haliphong RR Yd	Unauth	Proposed RT 57 ADD IV
616-0043	Long Con RR Siding N	Unauth	
616-0260	Hanoi Rubber Prod	Unauth	
616-0268	Hanoi Veh Maint Dpo	Unauth	
616-0433	Hanoi Engineering	Unauth	
616-0773	Haliphong Concrete Prod	Unauth	
616-0779	Van Dien Battery	Unauth	
616-0780	Haliphong Battery	Unauth	
616-1294	Haliphong Stor SE	Unauth	Proposed RT 57 ADD IV
616-2301	Hanoi POL	Unauth	Proposed RT 57 ADD IV
616-2302	Haliphong Shipyard Inch	Unauth	Proposed RT 57 ADD IV
616-2344	Haliphong Shipyard Thuong	Unauth	Proposed RT 57 ADD IV
616-2357	Hanoi Veh Dpo Giap	Unauth	Proposed RT 57 ADD IV
616-2431	Van Dien RR Siding	Unauth	Proposed RT 57 ADD IV
616-2655	Hanoi Concrete Prod Cham	Unauth	
616-2656	Hanoi Concrete Prod	Unauth	
616-2705	Hanoi Veh Repair Bach Mai	Unauth	
616-2706	Hanoi Veh Repair SW	Unauth	Proposed RT 57 ADD IV
616-2830	Thuong Xu POL	Unauth	
616-2869	Haliphong POL Tank Fab	Unauth	
616-3337	Thu Tai POL	Unauth	
616-3372	Hanoi Shipyard Thuong	Unauth	
615-0223	Lac Ha Hwy Br	Not Recom	Better interdiction point available
615-0009	Haliphong Hwy Br	Not Recom	Unserviceable
616-0734	Haliphong Transformer	Not Recom	Inactive
616-1089	Co Dong RR Causeway	Not Recom	Unserviceable
616-2299	Bang So POL	Not Recom	Inactive
616-2332	Hanoi POL Thai	Not Recom	Under consideration
616-2603	Phu Dong POL	Not Recom	Under consideration
616-2628	Co Huu Vion POL	Not Recom	Under consideration
616-2196	Hanoi RR Br	Deleted	Bypass; combined with JCS #13

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THE JOINT CHIEFS OF STAFF
Washington, D.C. 20301

The Joint Staff

DJSM-916-64
28 May 1964

MEMORANDUM FOR THE CHAIRMAN, JOINT CHIEFS OF STAFF

Subject: Targets and Forces Study -- Air Campaign
Against * * * * * (U)

Reference: JCS 2343/383

1. The reference contains an air strike target list of North Vietnam (NVN) and an analysis of the capabilities of execution using readily available forces.

2. Quantitative requirements for munitions have been computed for each target categorized within the subject paper. Gross requirements in South Vietnam (SVN) versus assets available as determined by the Director for Logistics are as follows:

	Bomb 500# ^{1/}		Bomb 750# ^{2/}		GAM-83A ^{3/}
Requirement (each)	55,970	or	42,048	or	975 ^{4/}
On Hand PACOM	3,368		40,750 ^{2/}		3,676 ^{2/}
CONUS Depots	184,547		302,073		236
Net Average	131,945		260,025		2,937

3. Although POL support for the air strikes does not present any major logistic problems, it should be noted that there are prepositioned commercially owned petroleum products at the air bases listed in the reference. The quantity on hand is normally that required to support CINCPAC OPLAN 32-64, Phase II for a 20-day period. Use of those stocks would degrade the capability of CINCPAC to put that plan into action. Resupply to each of the bases, therefore, would be essential. This action is planned to be accomplished by rail or road tankers. In each case, interdiction by opposing forces is possible. To insure adequate POL coverage, it would be

- 1/ Assets include about 180,000 substitute items loaded with "Composition B" instead of TNT.
- 2/ Quantities are prepositioned primarily as USAF war reserve materiel. Replacement of issues would be required to support other contingencies.
- 3/ The current nomenclature for the GAM-83A is AGM-12/B.
- 4/ If GAM-83A's are used, the quantities shown for 500# and 750# bombs, would be reduced by 2290 and 1665 respectively.

GROUP 1
EXCLUDED FROM AUTOMATIC
DOWNGRADING AND DECLASSIFICATION

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(Revised - 30 May 1964)

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DATE

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necessary for the in-country forces to provide adequate protection of these supply lines to insure delivery of products to the air bases concerned. For the type operation envisioned, there would be no problem at Clark Air Force Base.

J. W. DAVIS
Rear Admiral, USN
Deputy Director

Enclosure

Lt. Col. E.S. Goepfer, USA, J-4
Action Officer, Ext. 52226

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(Revised - ²30 May 1964)

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ENCLOSURE

F-105 AIRCRAFT GROUNDING*
(URGENT ACTION TECHNICAL ORDER 1F-F-105-909)

Aircraft assigned PACOM units	<u>104</u>
Available and serviceable in PACOM	10
Available and serviceable en route from COMUS	4
TOTAL available and serviceable (at Kadena, Itazumi and En Route)	<u>22</u>
In work, not available	52
Not available, not in work	90
Average man hours/aircraft inspection	352
Average man hours/aircraft correction of discrepancies	200

- NOTES: 1. Limiting factors for placing aircraft in work are availability of aerospace ground equipment world-wide and qualified personnel.
2. Aircraft awaiting inspection and correction of discrepancies may be returned to service in justifiable emergency.

Status as of 23 May 1964

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Enclosure

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sent per you
3



THE JOINT CHIEFS OF STAFF
WASHINGTON, D. C. 20301

JCSM-460-64
30 May 1964

MEMORANDUM FOR THE SECRETARY OF DEFENSE

Subject: Air Campaign Against North Vietnam (TS)

1. The Joint Chiefs of Staff have conducted a study of targets in North Vietnam (NVN) that are suitable for air attack utilizing available forces to conduct the operations in the event a policy decision is made to conduct air strikes against NVN.
2. For the purpose of this study it is assumed that the over-all purpose of the air campaign is to cause the Democratic Republic of Vietnam (DRV) to desist from supporting the Pathet Lao (PL) and Viet Cong (VC) and to reduce the capability of that Government from renewing any such support in the future.
3. For this purpose, three categories of targets have been developed. Target lists for each category, with a target analysis prepared by the Defense Intelligence Agency, are attached as Appendices A, B, and C hereto. These categories furnish options for attack objectives and provide for flexibility of execution.

Category A - those targets the destruction of which would bring about a reduction of DRV support of the PL and VC actions in Laos and the Republic of Vietnam (RVN). Appendix A. (Category A targets by type include armed reconnaissance along highways leading to Laos, airfields identified with supporting PL/VC, supply and ammunition depots, petroleum storage, and military headquarters and barracks connected with PL/VC support and infiltration.)

Category B - those targets the destruction of which would reduce the DRV military capability to take action against Laos and the RVN. Appendix B. (Category B targets by type include remaining airfields, important railroad and highway bridges, supply and ordnance depots in northern NVN, aerial mining, and petroleum storage in Hanoi and Haiphong.)

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DOES NOT APPLY

JCS 3400/100

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Enclosure A

(Revised by Decision - 30 May 1964)

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Category C - significant industrial targets, the destruction of which would effectively destroy the NVN industrial base. Appendix C (not including home industry).

4. The Joint Chiefs of Staff, in reviewing the force requirements to conduct air strikes on selected targets in NVN, have based their computation on an assumption that 85 per cent probable destruction should be achieved. With regard to availability of aircraft, it was assumed that only the Vietnamese Air Force (VNAF) and US FARM GATE aircraft now in RVN that could be diverted from the counterinsurgency effort and the US forces that are scheduled for deployment in CINCPAC OPLAN 37-64 would be utilized.

5. The following is a list of available strike aircraft and sortie capability:

	<u>Type</u>	<u>Location</u>	<u>Number</u>	<u>Daily Sortie Rate</u>	<u>Combat Radius of Action</u>
VNAF	A-1H	Bien Hoa/ Da Nang	1 Sqn 25	*18	561
FARM GATE	B-57	Tan Son Nhut	1 Sqn 24	*17	924
	B-57	Clark AB/SEA	1 Sqn 24	*17	924
USAF	F-105	Korat	1 Sqn 18	*13	776
	F-100	Takhli	1 Sqn 13	*13	541
	F-100	Clark AB/SEA	2 Sqs 36	*26	541
NAVY/ USMC	A-4C	CVA	2 Sqs 24	**2.12	515
	A-1H	CVA	1 Sqn 12	**1.41	561
	A-3B	CVA	1 Sqn 12	**1.5	1,000

*Sortie rate 21 per month per aircraft (normal wartime planning factor).

**Sortie rate per aircraft per operating day (20 operating days per month).

Note: The above represents aircraft now available and does not consider additional A-1 aircraft programmed for VNAF and FARM GATE, nor does it provide for additional TAC/SAC and naval forces that could be made available.

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JCS 23457-82

6

Enclosure A

(Revised by Decision - 30 May 1964)

6. It is difficult to estimate the time required to attack all of the targets in each category and attain an 85 per cent probability of destruction, due to vagaries of weather, terrain, difficulty of target identification, maintenance and replacement of aircraft, and other variables that accompany an operation of this nature. Subject to the reservations listed, it is estimated that it would take:

a. VNAF: Seven plus months for Category A targets alone. However, it is doubtful that the current resources of the VNAF (pilots, pilot training, logistics base, and aircraft availability) are such that continuous combat operations of the order envisioned could be maintained for the period set forth.

b. VNAF and FARM GATE B-57s: Category A targets - two plus months.

c. VNAF and FARM GATE, plus USAF/USN/USMC aircraft readily available (as listed in CINCPAC OPLAN 37-64): Category A targets - 12 days; all categories - 46 days.

d. In the event a decision is made to strike a major blow against NVN, a substantial reduction in time can be achieved by deploying additional tactical fighter squadrons (USAF and USMC), an additional CVA group to Southeast Asia, and utilizing those SAC forces listed in the Joint Strategic Capabilities Plan for contingency plans.

e. To sustain the 85 per cent probability of destruction to airfields, roads, railways, bridges, and other facilities which can be repaired rapidly, restrikes would have to be conducted for an indeterminate period.

7. The Joint Chiefs of Staff consider that those targets in NVN identified in Appendices A, B, and C offer a list of air strike targets within each category that if attacked in the order listed would have an ascending effect on DRV support of insurgency operations, military capabilities, and industrial output. Additionally, VNAF, USAF, and US naval forces readily available are capable of striking any or all of the targets and achieve an 85 per cent probability of destruction; however, prior to initiating operations, US forces should be deployed to their operational locations.

8. Eighty-five per cent of the targets listed in Appendices A, B, and C are included in CINCPAC OPLANs, and CINCPAC is responsible for

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JCS 233/383

(Revised by Declaration - 30 Mar 1964)

Enclosure A

additional targets selected as intelligence dictates. The process of adding or deleting targets is a continuing one to maintain currency of OPLANs. These fully staffed and JCS approved plans for operations in Southeast Asia provide a suitable framework for conducting an air campaign against NVN.

9. Air operations can be conducted against any of the targets on the attached list. The intensity of execution can range from selective strikes in an ascending order of gradually increasing military pressure to a concentration of effort designed to attain the effect of a sudden blow.

10. From a military viewpoint, it is considered that the most effective application of military force will result from a sudden sharp blow in order to bring home the penalties for violating international agreements and the intent of the United States to bring a cessation of DRV support of the insurgency in Laos and RVN.

11. Prior to the execution of any air strikes, full low-level reconnaissance coverage of the target system should be accomplished to update target folders and provide detailed data for combat mission planning. Where feasible and without prejudicing the security of our own forces, immediately prior to conducting air strikes against NVN, leaflet missions should be flown warning the civilian population that certain targets or target categories are to be attacked and that the areas adjacent thereto should be evacuated to preclude civilian casualties.

12. The Joint Chiefs of Staff have approved this target list for use in current military planning.

For the Joint Chiefs of Staff:

SIGNED

MAXWELL D. TAYLOR
Chairman
Joint Chiefs of Staff

Attachments

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JCS 2-43/383

8

(Revised by Decision - 30 May 1967)

APPENDICES AND ANNEXES TO ENCLOSURE A

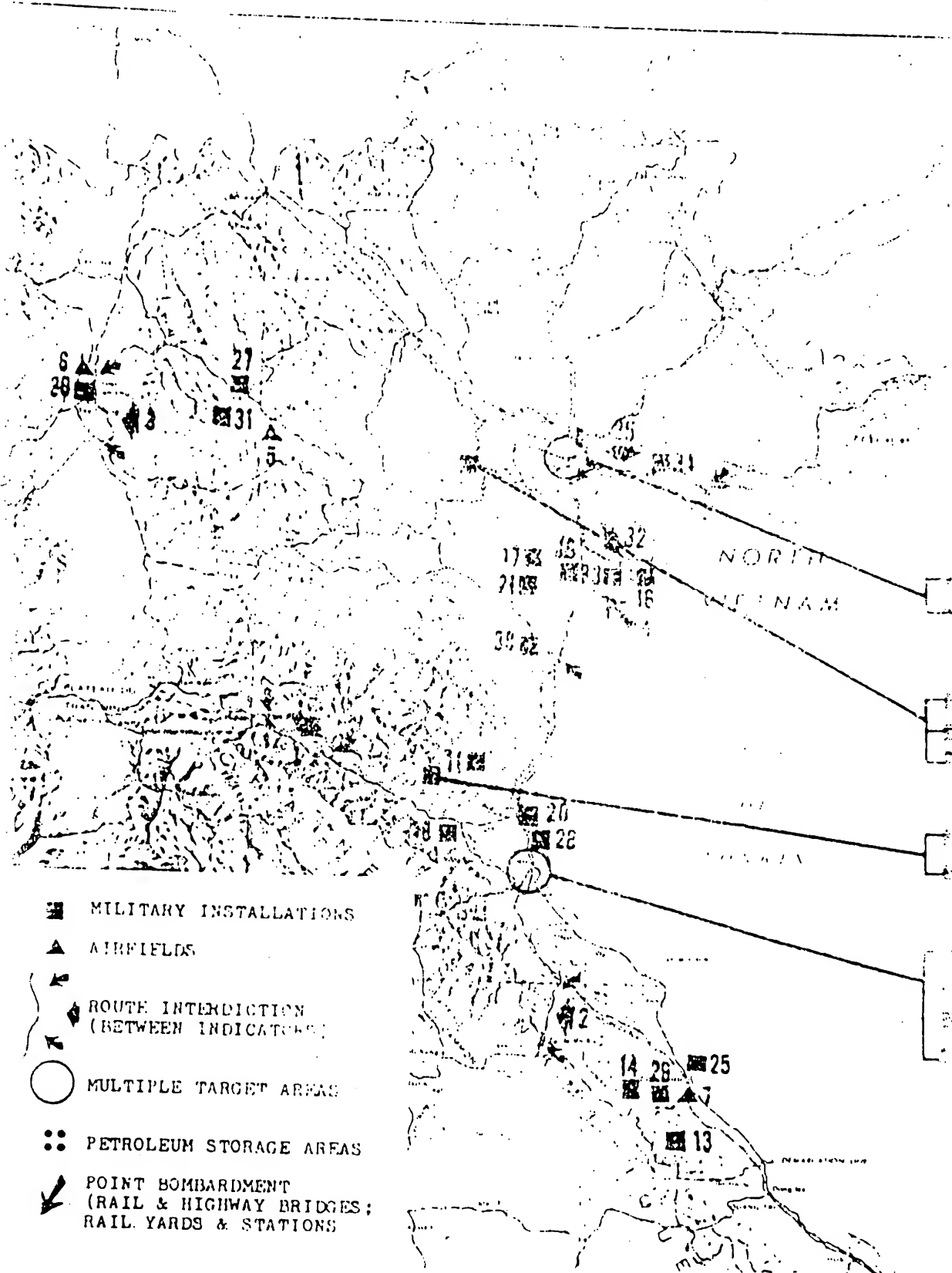
Appendix A (1 page)
Annex (8 pages)

Appendix B (1 page)
Annex (10 pages)

Appendix C (1 page)
Annex (2 pages)

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JCS 2343/383

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NAME AND
(BE) NUMBER

IDENTIFICATION AND LOCATION

SUPPORT TO PL/VC

EFFECT OF STRIKE
ON CAPABILITY TO
SUPPORT PL/VCTARGET SECURITY
INCLUDING AAA

NUMBER OF BOMBS
(NON-NUC) FOR 85%
PROBABLE DAMAGE
500 lb. or 750 lb. or 83A

5
0616-08420

Ha San Airfield
211201N 1040305E
Hot near urban area

Primary installation
provides probably 30%
direct support to PL/VM

Reduce aerial resupply,
air evac & troop move-
ment by approx 15%

Unknown

84

70

-

6
0616-08415

Dien Bien Phu Airfield
212342N 1030035E
Hot near urban area

Probably 31-40% of ac-
tivity of PL associated
with this field. Also
major air evac facility
to Hanoi

Immediate reduction of
probably 25% aerial re-
supply capabilities

4 gun AAA posi-
tion occupied
south end run-
way

84

70

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7
0617-08400

Dong Hoi Airfield
173045N 1063545E
4 miles - Dong Hoi

Probably 3% of aerial
resupply activities to
PL/VC in southern Laos

Reduce 20-30% transport
capabilities available
in southern sectors Laos
to include SVN.

Amount Unknown

84

70

-

8
0617-08412

Ha San Airfield
211201N 1040305E
4 miles - Vinh

Principal PL/VM aerial
logistical resupply
facility. Probably 20-
30% direct support

Reduction of 10-15% of
by air of southern and
central Laos

6 occupied med
emplacements
with 40 mm.
5 other emplace-
ments under con-
struction mid 63

84

70

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1. NUMBER

IDENTIFICATION AND LOCATION

9
0017-0231
Phu Van Ammo Depot NE
185055N 1051940E
Not near urban area

1
017-0090
Phu Van Ammo Depot E
185005N 1051841E
Not near urban area

1
017-0491
Phu Qui Ammo Depot
191730N 1052126E
5 miles NW Qui Lam

1
017-0182
Vinh Petroleum Products
storage
184009N 1054315E
1 mile - Vinh

SUPPORT TO PAVN

Ammo depot supports
PAVN 324th Div and cap-
able of supporting
PAVN Bns in Hong Hai
and PL/VN in Laos.

Ammo depot TAVN 324
Div and capable of
supporting PAVN Bns
in Hong Hai area and
PL/VN in PDI

Probably some support
to PL/VN not far from
Laos

Probably 15% of POL
supplies provided to
central and southern
Laos PL/VN units

EFFECT OF STRIKE
ON CAPABILITY TO
SUPPORT PL/VN

Reduce capability of
PAVN to support
PL/VN

Reduce military cap-
ability of PAVN to
support PL/VN

Probably noticeable
reduction ammo sent
into Laos.

Estimated 5-10% in-
country POL support
capabilities

TARGET SECURITY
INCLUDING AAA

Unknown
Probably light
AA

Probably light
AAA

No AAA
identified

Five controlled
AAA were avail-
able. Estimated
40+ AAA guns in
complex, 5 new
sites under
construction

NUMBER OF BOMBS
(NON-HUC) FOR 50%
PROBABLE DAMAGE
500 750 000
lb. or lb. or 52A

755 610

765 610

765 610

434 432

Annex to
Appendix A

(Revised by Decision - 30 May 1964)

~~TOP SECRET~~

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~~TOP SECRET~~

ORDER AND
(BE) NUMBER

IDENTIFICATION AND LOCATION

SUPPORT TO PL/VC

EFFECT OF STRIKE
ON CAPABILITY TO
SUPPORT PL/VC

TARGET SECURITY
INCLUDING AAA

NUMBER OF BOMBS
(HIGH-NUC) FOR 55%
FIREABLE DAMAGE
500 - 750 - 831
10, or 16 or 831

Annex to
Appendix A

3
6017-0222

Xom Bang Army Supply Depot
17064IN 1064509E
Not near urban area

Supports infiltration
activities in DMZ

Disrupt supply lines
VC and PL

Probably light
AAA

765 610 -

4
6017-0239

Luat Son Army Supply Depot
1709N 10646E
Not near urban area

Direct support to 270th
Inf Regt. 21 water-
houses capable of major
support to PL/VC

Directly affect infil-
tration and line
crossing activities in
DMZ

Probably none

151 185 -

5
6017-0044

Vinh Army Supply Depot East
163340N 1054150E
In Vinh

Supports infiltration
and line crossing acti-
vities in DMZ and
southern Laos

Reduce support of PL/VC
via Route 8

Probably medium
and light AAA

151 185 -

6
6016-0132

Nam Dinh Storage Depot
202510N 1051003E
In Nam Dinh

Supply storage for items
reaching from over Route point
7

2 btrys AAA,
caliber unknown

151 185 -

7
6016-0249

Qui Hau Ammo Depot
203757N 1051430E
Not near urban area

Location indicates it
possible serves as
support installation
to PL in Laos

Little effect on capa-
bility to support PL

No AAA identi-
fied in vicinity

765 610 -

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(Revised by Decision - 30 May 1964)

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~~SECRET AND
(B) NUMBER~~

IDENTIFICATION AND LOCATION

SUPPORT TO PL/VC

EFFECT OF STRIKE
ON CAPABILITY TO
SUPPORT PL/VC

TARGET SECURITY
INCLUDING AAA

NUMBER OF BOMBS
(NON-NUC) FOR 85%
PROBABLE DAMAGE
500 750 GAM
1b.gr 1b.gr 83A

Annex to
Appendix A

18
0617-0122

Phu Van Army Supply Depot
SE Du Luon
184703N 1052010E
Not near urban area

Assumed that this im-
portant to supply of
PL/VC since it is in
close proximity to
Laos and known supply
route.

Major disruptive effect
on PL/VC

No AAA identi-
fied in immedi-
ate area

151 185 -

19
0616-0286

Ba Lam Army Supply Depot SW
204004N 1053341E
Not near urban area

Probably negligible
Depot is not large and
is located in interior
of DRV

Probably negligible

No AAA identi-
fied

151 185 -

20
0617-0087

Vinh Son Army Supply Depot
SW Do Luong
185340N 1051745E
Not near urban area

Location relative to
Laos would indicate it
lends support to PL in
Laos and probably thru
Laos to VC in SVN

Probably disruptive

No AAA identi-
fied in immedi-
ate vicinity

151 185 -

21
0616-0431

Hoai An Ammo Depot
202557N 1053245E
Not near urban area

Possibly lends support
to PL/VC secondary
lead to Laos

Probably have negligible
effect

No AAA identi-
fied in vicinity

765 610 -

22
0616-0120

Xuan Mai Hq 338 Inf Div
205306N 1053437E
Not near urban area

Hq to infiltration
school supporting
PL/VC

Destroy nerve center
of school and Hq of
338 Inf Bde

Unknown
Probably AAA

57 45 -

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~~SECRET AND
(BE) NUMBER~~

	IDENTIFICATION AND LOCATION	SUPPORT TO PL/VC	EFFECT OF STRIKE ON CAPABILITY TO SUPPORT PL/VC	TARGET SECURITY INCLUDING AAA	NUMBER OF BOMBS (NON-RUC) FOR 85% PROBABLE DAMAGE
23 0616-00277	Xuan Mai Army Bks 205641N 1053355E Not near urban area	Training center for EPS and cadre being infil- trated into RVN	Disruption of personnel supply line to VC	Unknown Probably light AAA	1680 1330 -
24 0616-00438	Xuan Mai Army Bks SSW 205311N 1053506E Not near urban area	Training center for EPS and cadre being infil- trated into RVN	Disruption of personnel supply line to VC	Unknown Probably light AAA	1680 1300 -
25 0617-0327	Dong Hol Hq DMZ Front 17300N 105370E 2 miles - Dong Hol	Support to VC thru Hq 325th Inf Div	Reduce support of mili- tary operation in south	Probably light AAA	57 45 -
26 0617-0069	Vinh Hq M1 Reg IV 184014N 1054005E In Vinh	Commands MR IV involving reinforcement to RVN south and PL west	Reduce 269th and 271st Inf Regt. Hence reduc- tion to VC/PL support	Probably light AAA	304 212 -
27 0616-0103	Son La Army Supply Depot 212005N 1055430E Not near urban area	Possible support of FAVN and PL/VC at Sam Neua area, Laos	Destruction would re- duce FAVN support of PL/VC via Rte 41 to Sam Neua area, Laos	Probably light AAA	151 185 -
28 0617-0211	Vinh Son Hq 324 Inf Div S Do Luong 185404N 105180E Not near urban area	Main elements 324th Inf Div on Rte 7 in support of PL/FAVN in Laos	Cause major disruption of support to Laos	Probably light AAA	304 212 -

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Annex to
Appendix A

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IDENTIFICATION AND LOCATION

SUPPORT TO PL/VC

EFFECT OF STRIKE
ON CAPABILITY TO
SUPPORT PL/VC

TARGET SECURITY
INCLUDING AAA

NUMBER OF BOMBS
(NON-NUC) FOR 85%
PROBABLE DAMAGE
500 750 600
1b. or 1b. or 63A

29
0617-0090

Charh Hoa Army Bks and Hq
325th Inf Div SE
173103N 1053452E
3 miles Dong Hol

Supports MR 4 in NWZ
area constitutes major
formation in area

Assistance to VC would
be reduced

Probably light
AA

304 212 -

30
0616-0526

Dien Bien Phu Hq 3
212405N 1030108E
City

Direct support to PL at
Phong Saly Province

Would reduce major
supporting unit, 316th
Inf Bde at Dien Bien
Phu

2 Btrys medium
AAA, probably
some light AA

304 212 -

31
0616-0371

Son La Army Bks A Hq Hq
Reg
211930N 1035500E
In Son La

Immediate support to
316th Inf and assis-
tance to PL

Would reduce flow of
supplies west to Laos
from MR 15A

Probably light
AAA

304 212 -

32

Road Route 1 and Rail Route
from Hamrong to Hanoi
191520N 1054740E to
210100N 1055110E
6 miles - Sam Son; in Thanh/
Hoa; in Hanoi

Principal LOC from
Hanoi to south

Would seriously hinder
troop/supply movement
south

Medium and light
btrys at Hanoi.
Probably light
AA at Vinh Binh

- - -

33
0616-0114

Man Dinh Hq Hq Reg III
Right Bank
202452N 1060925E
In Man Dinh

No direct association
with PL/VC

Indirect effect only

Probably light
AAA

304 212 -

~~TOP SECRET~~

~~TOP SECRET~~

Annex to

~~TOP SECRET~~

CRUIER AND
(BE)NUMBER

IDENTIFICATION AND LOCATION

SUPPORT TO FL/VC

EFFECT OF STRIKE
ON CAPABILITY TO
SUPPORT FL/VC

TARGET SECURITY
INCLUDING AAA

NUMBER OF BOMBS
(NON-NUC) FOR 85%
PROBABLE DAMAGE
500 750 83A
1b-2r 1b-2r

34
0616-0113

Hai Duong Hq M1 Reg Left
Bank
205657N 1062006E

No direct support

Disruption of road/rail
center would restrict
movement Hanoi/Haliphong

Possibly light
AAA

304

212

Annex to
Appendix A

35

Route 5 and RR
210100N 1005510E to
205115N 1064131E
Haliphong, Hanoi area

Indirect supply only

Harassment and destruc-
tion personnel and/or
supplies enroute from
port area to Hanoi/Haliphong

84

70

36
0616-03408

Hanoi Gia Lam Airfield
210212N 1055318E
1 mile - Hanoi

Probably 20-30% of FL/
VM/VC support associa-
ted this installation

Reduction 10% direct
support and 20-30% of
indirect support to
fields providing direct
support to FL/VM

AAA in area
has 5 groups
of 8 emplace-
ments, number
occupied un-
known

C

37
0616-0003

Hanoi NHD Army and MZ Hq
Bks and Supply Depot
210200N 1055040E
In Hanoi

Controls Policy

Disruption of high
Command and local
supplies

16 medium and
light AA Btys
protecting
Hanoi

304

212

38
0617-0204

Thien Linh Dong Army
Supply Depot
194257N 1054255E
8 miles - Thanh Hoa

Adjacent to routes
supplying FL/VC pro-
bably important to
their continued opera-
tions

Require relocating of
facilities and replace-
ment of destroyed
material. Delay of
supplies to FL/VC

151

185

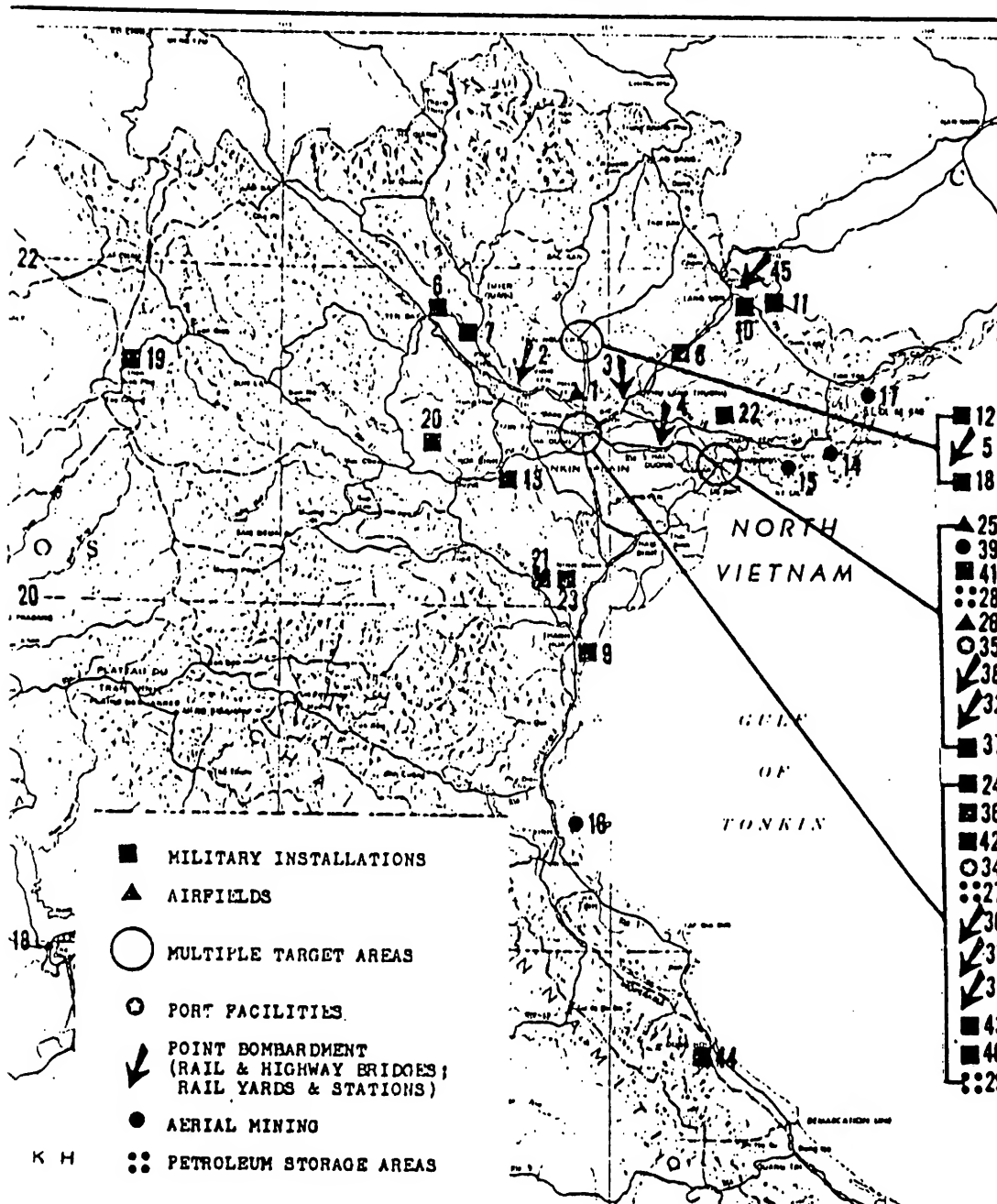
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APPENDIX B

LOCATION AND ORDER OF CATEGORY II TARGETS



~~TOP SECRET~~

NOTE: See attached Annex for target analysis.

~~TOP SECRET~~

ANNEX TO APPENDIX A
CATEGORY B TARGETS

HAIPHONG

ORDER NO. (BE) NUMBER	IDENTIFICATION AND LOCATION	EFFECT OF STRIKE ON CAPABILITY TO SUPPORT PL/VC	EFFECT OF STRIKE ON CAPABILITY TO WAGE WAR	TARGET SECURITY INCLUDING AAA	NUMBER OF BOMBS (NON-NUC) FOR 85% PROBABLE DAMAGE
1 616-00520	Phu Yen Airfield 211330N 1054830E 30 miles - Hanoi	Estimated 10% of logistic resupply capability	Reduction 50% jet medium support capability by destroying this facility	Probably defended by units of 367 AAA Regiment	70 84 -
2 616-00017	Viet Tri RR and Hwy Bridge over Rivierle Claire 211750N 1052655E 10 miles - Son Tay	Interdicts primary rail route from Khaming and road north of river	Denial of through artery Residual capability limited for weeks	-	310 215 140
3 616-00023	Cua Tung Highway Bridge over Song Cau River 211212N 1060539E 2 miles - Bac Ninh 7 miles - Phu Lang Thuong	Assist in interdicting highway movement from Haiphong and/or Nanning	Denial of through artery Residual capability limited for weeks	-	150 125 45
4 616-00020	Haai Duong RR and Highway Bridge over Thai Binh 205633N 1062128E 1 mile - Haai Duong	Interdicts rail and highway routes between port of Haiphong and Hanoi and/or Hinterland	Denial of through artery Residual capability limited for weeks	-	310 215 140

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ORDER AND
(BE) NUMBER

IDENTIFICATION AND LOCATION

EFFECT OF STRIKE
ON CAPABILITY TO
SUPPORT PL/VC

EFFECT OF STRIKE
ON CAPABILITY TO
WAGE WAR

TARGET SECURITY
INCLUDING AAA

NUMBER OF BOMBS
(NON-NUC) FOR 85%
PROBABLE DAMAGE
500 750 GAM
1b.or 1b.or 83A

5
0616-0409

Thai Nguyen RR Station Yards
and Shops
213331N 1055105E
In Thai Nguyen

Estimated little reduc-
tion of in-country
direct support to PL/VM

Would curtail local in-
dustrial complex move-
ment of basic iron and
steel components

Estimated 38
AAA weapons de-
ployed in area
Approx 4 NM
ARC of complex

1058 814

6
0616-0146

Yen Bay Ordnance Depot
214233N 1045250E
In Yen Bay

Though not directly in
support of PL/VC depot
probably distributes to
those that do

Considerable importance
to over-all situation

No AAA identifi-
fied in vicinity

765 610

7
0616-0316

Tai Xuan Ammo Depot SE
214330N 1050800E
Net in urban area

Strike would probably
not noticeably affect
PL/VC support capabil-
ity

Relatively minor depot
off main communications
lines

No AAA identifi-
fied in vicinity

765 610

8
0616-0323

Kang Het Ammo Depot
213211N 1061417E
8 miles north of KEP
Airfield

Probably noticeably re-
duce ammo being sent
into Laos

Probably noticeably re-
duce capability to wage
war

No AA identifi-
fied

765 610

9
0617-0043

Than Hoa Army Bks Supply
Depot
194823N 1054633E
In Than Hoa

Negligible

Reduce national
strength by 5,000
as Than Hoa is location
of 330th Brigade

Protected by
light AAA btys

151 185

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~~TOP SECRET~~

Annex to
Appendix

~~TOP SECRET~~

ORDER AND
(BE) NUMBER

IDENTIFICATION AND LOCATION

EFFECT OF STRIKE
ON CAPABILITY TO
SUPPORT FL/VC

EFFECT OF STRIKE
ON CAPABILITY TO
WAGE WAR

TARGET SECURITY
INCLUDING AAA

NUMBER OF BOMBS
(NON-NUC) FOR 85%
PROBABLE DAMAGE
500 750 GAM
lb. or lb. or 83A

10
0616-0108

Lang Son Army Supply Depot
215050N 1064525E
In Lang Son

Would not significantly
affect FL/VC support
capability

Considerably reduce NVN
capabilities in NE
along major supply
routes from China

No AAA identi-
fied

151 185

Annex to
Appendix B

11
0616-0466

Loc Binh Army Supply Depot
214440N 1065605E
10 miles - Lang Son

Would not significantly
affect FL/VC support
capability

Considerably reduce NVN
ability to wage war in
NE and along China bor-
der

No AAA identi-
fied

151 185

12
0616-0210

Thai Nguyen Army Supply
Depot N
213835N 1055110E
Not near urban area

Would have minor direct
effect on capability to
support FL/VC

Would to some extent
limit PAVN ability to
defend this increasingly
important industrial
area

No AAA identi-
fied

151 185

13

13
0616-0137

Xom Chuang Army Supply Depot
S-Hoa Binh
204632N 1051902E
3 miles - Hoa Binh

Slight reduction

Slight reduction

No AAA identi-
fied

151 185

14
615-0009

Aerial Mining Cam Pha
210128N 1072232E
Not near urban area

15% loss of import
capability

Denial places burden on
road transport to Hin-
terland and coastal
areas

No AAA btrys are
reported in this
area

2530 1512

~~TOP SECRET~~

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~~TOP SECRET~~

ORDER AND
(BE) NUMBER

IDENTIFICATION AND LOCATION

EFFECT OF STRIKE
ON CAPABILITY TO
SUPPORT PL/VC

EFFECT OF STRIKE
ON CAPABILITY TO
WAGE WAR

TARGET SECURITY
INCLUDING AAA

NUMBER OF BOMBS
(NON-NUC) FOR 85%
PROBABLE DAMAGE
500 750 GAN
1b. or 1b. or 83A

15
615-0008

Aerial Mining Hon Gay
205704N 1070430E
Not near urban area

Cripple NV Navy capability
to support VC

Destroy minor logistic
and repair capabilities
and possibly destroy
bulk of larger navy
craft

1 Btry of light
AA 2530 1512 -

16
617-0038

Aerial Mining Ben Thuy Port
183852N 1054239E
3 miles - Vinh

Little effect on naval
support to VC. Some
interference with junk
fleet

Delay some transship-
ment capability. Little
effect on VN Navy

None indicated 2530 1512 -

17
615-0010

Aerial Mining Port Wallut
211210N 1073421E
Not near urban area

Would affect NV Navy
capability to harass
shipping hostile to VC

Would reduce patrol and
radar warning capability
by 25%

4 medium AA guns 2530 1512 -

18
0616-0107

Thai Nguyen Co. Mil Reg
213708N 1054020E
In Thai Nguyen

Reversible

Some reduction in the
2,000 troops and HQ
facilities

Some light AA 304 212

19
0616-0171

Dien Bien Phu Army Bks
212305N 1030120E
Dien Bien Phu

Would represent loss
of prime support unit
in NW

Loss of 5,000 troops

2 Btrys medium
AAA 1680 1330 -

20
0616-0129

Ban Xom Lom Bks
204935N 1044335E
Not near urban area

Loss of possible divi-
sion in training for
PL support

Loss of 10,000 troops
and 250 buildings.
Destroy extensive
training facilities

Division AAA Bn 1680 1330 -

~~TOP SECRET~~

Annex to
Appendix B

~~TOP SECRET~~

14

~~TOP SECRET~~

ORDER AND
(BE) NUMBER IDENTIFICATION AND LOCATION

21
0616-0291 Ba1 Thuong Army Bks Complex
200501N 1052601E
Not near urban area

Annex to
Appendix B

22
0616-0298 Dong Trieu Army Bks, Ne
Trai Sun 1063228E
200708N 1063228E
Not near urban area

23
0616-0273 Quang Suoi Army Bks NE
201047N 1055426E
Not near urban area

24
0616-0202 Hanoi Mil HQ and NVN ADC
210150N 1055340E
In Hanoi

25
0616-08405 Hai Phong Cat B1 Airfield
204902N 1064340E
4 miles - Hai Phong

EFFECT OF STRIKE
ON CAPABILITY TO
SUPPORT PL/VC

EFFECT OF STRIKE
ON CAPABILITY TO
WAGE WAR

TARGET SECURITY
INCLUDING AAA

NUMBER OF BOMBS
(NON-NTIC) FOR 85%
PROBABLE DAMAGE
500 750 GMM
1bsgr 1bsgr 83A

Reduce over-all strength
of available troops

Loss of 3,000 men to
PAVN

AAA support
from brigade

1680 1330 -

No direct effect

Loss of 3,000 troops
and regimental train-
ing facilities

No known AAA
support avail-
able except
light rec
weapons

1680 1330 -

Destroy large training
facility and up to
10,000 troops

Destruction of large
adm hqs and 10,000
personnel

No known AAA
support in
area

1680 1330 -

Minor effect

Unless CHICOM fighter
aircraft deployed to
NVN, site destruction
would limit only
country AAA capability

Probably com-
posed of 134
AAA weapons.
No tactical
air available

193 135

Reduction of estimated
20% of in-country re-
supply and support to
airfield complex

Reduce capability to
support jet medium
bomber aircraft by
50%

Unoccupied 8 gun
AAA position, an
occupied 8 gun
light AA posi-
tion both on
east of airfield

70 84 -

~~TOP SECRET~~

~~TOP SECRET~~

~~TOP SECRET~~

~~ORDER AND
(BE) NUMBER~~

~~IDENTIFICATION AND LOCATION~~

~~EFFECT OF STRIKE
ON CAPABILITY TO
SUPPORT PL/VC~~

~~EFFECT OF STRIKE
ON CAPABILITY TO
WAGE WAR~~

~~TARGET SECURITY
INCLUDING AAA~~

~~NUMBER OF BOMBS
(NON-NUC) FOR 85%
PROBABLE DAMAGE
500 750 GAM
1b.or 1b.or 83A~~

26
0616-08433

Haiphong Kien An A.-field
204829N 1063648E
5 miles - Haiphong

Probably 5-10% of air-
lift and resupply
support facilities in
country

Reduction of air trans-
port capabilities by
10%, and in-country
capability to handle
deployed jet fighters
by 10-20%

6 mobile AA wea-
pons near in-
stallation, 16
emplacements.
Number occupied
unknown. Fire
control system
probably avail-
able

70

84

-

Annex to
Appendix B

27
0616-0116

Hanoi Petroleum Products
Storage
210341N 1055348E
2 miles - Hanoi

Probable reduction of
10% of POL support to
PL/VM

1 of 4 major POL in-
stallations in-country
would have considerable
effect

Estimated 134
AAA weapons. No
TAC/AIR avail-
able in-country

484

432

16

28
0616-0005

Haiphong Petroleum Storage
Area
205216N 1063342E
1 mile - Haiphong

Reduction 10-20% in-country
petroleum storage facil-
ities available to
support PL/VC

Probable reduction of
20% of POL storage
capability

Fire control pro-
bably available.
72 medium AAA em-
placements. 50
occupied. Mobile
AAA weapons avail-
able; caliber
amount not reported

484

432

-

~~TOP SECRET~~

~~TOP SECRET~~

~~TOP SECRET~~

ORDER AND
(BE) NUMBER

IDENTIFICATION AND LOCATION

EFFECT OF STRIKE
ON CAPABILITY TO
SUPPORT PL/VC

EFFECT OF STRIKE
ON CAPABILITY TO
WAGE WAR

TARGET SECURITY
INCLUDING AAA

NUMBER OF BOMBS
(NON-NUC) FOR 85%
PROBABLE DAMAGE
500 750 GAM
1b. or 1b. or 83A

29
0616-0247

Hanoi Petroleum Products
Storage Base Hoi
205955M 1055045E
In Hanoi

Reduction of estimated
10% of POL support
capability

1 of 4 major POL facilities, constitutes
estimated 20% in-country POL storage

Fire control
Radar available
Estimated 109
medium AAA weapons
in complex
Number 118 AAA
not reported

484 432 -

30
0616-0031

Hanoi RR CLP Yard and Shops
210118N 1055042E
In Hanoi

Immediate reduction of
yard classification
capabilities and routing of RR units,
north and south of
Red River

Reduce RR classification,
repair, transshipment capabilities
by estimated 20%

All AAA units
Hanoi; 15 groups
of 8 emplacements; 4 groups
of 6 emplacements; 6 groups
of 4 emplacements; for an
estimated 134
medium AAA
weapons

1058 814 -

31
616-00011

Hanoi RR and Highway Bridge
over Canal de Rapides
210435N 1055443E
4 miles - Hanoi

Interdicts primary
route from Hanning and
Haiphong

Denial of through
artery. Residual capability limited for weeks

310 215 140

32
616-00069

Haiphong Highway Bridge
Marshall Joffre O Tram Bac
205137N 1064100E
In Haiphong

Assist in isolating
Haiphong and interdicting
highway movements from port area

Denial of through
artery. Residual capability limited for weeks

150 125 45

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~~TOP SECRET~~

ORDER AND
(BE) NUMBER

IDENTIFICATION AND LOCATION

EFFECT OF STRIKE
ON CAPABILITY TO
SUPPORT PL/VC

EFFECT OF STRIKE
ON CAPABILITY TO
WAGE WAR

TARGET SECURITY
INCLUDING AAA

NUMBER OF BOMBS
(MAG-30C) FOR 85%
PROBABLE DAMAGE
500 750 GAM
1b. or 1b. or 83A
310 215 140

33
616-00012

Hanoi RR and Highway Bridge
over Red River
210230N 1055200E
In Hanoi

Interdicts primary rail
routes from both Hanoi
and Haiphong

Denial of thru artery
Residual capability
limited for weeks

34
616-0014

Hanoi port facilities
210137N 1055149E
In Hanoi

Probably reduce traffic
directly related to
support of PL/VC by
estimated 30%

Curtail probable 30%
of maritime trade
activities

Probably AAA
medium weapon
capability ex-
ceeds 109 total
fire control
radar in complex
gunboats and
light naval
craft augment
major AAA effort

2530 1512

35
616-0001

Haiphong port facilities
205155N 1054145E
In Haiphong

Reduction of probable
20% in country port
capability to trans-
port import materials
to PL/VC units

Destruction major port
facility limit country
import-export activi-
ties by estimated 30%

Naval ships could 2530 1512
augment estimated
73 medium AAA em-
placements. Ground
force installations
in complex could
direct AW and light
AAA fire power. No
tactical air avail-
able.

~~TOP SECRET~~

~~TOP SECRET~~ORDER AND
(BE) NUMBER

IDENTIFICATION AND LOCATION

EFFECT OF STRIKE
ON CAPABILITY TO
SUPPORT PL/VCEFFECT OF STRIKE
ON CAPABILITY TO
WAGE WARTARGET SECURITY
INCLUDING AAA

NUMBER OF BOMBS
(NON-NUC) FOR 85%
PROBABLE DAMAGE
500 750 GAM
1b.gr 1b.gr 83A

Annex to
Appendix B36
0616-0259

Van Dien Army Supply Depot
205610N 1055050E
4 miles - Hanoi

Probably contributes
little to support of
PL/VC and its minor
functions could be
readily assumed by
adjacent depots

As part of Hanoi depot
complex this probably
important cog but func-
tions could be assumed
by nearby depots

16 medium and
11 light btrys of
AAA identified
in area

151 185 -

37
0616-0061

Haiphong Ammo Depot Kien
An SW Pug
204838N 1063825E
3 miles - Haiphong

No noticeable effect

Depot fairly signifi-
cant to NVN over-all
strength

10 medium and
11 light AAA btrys
in vicinity

765 610 -

38
616-00332

Haiphong Highway Bridge
over Son Da Beach
210020N 1064126E
8 miles - Haiphong

Delay movement of
supplies from Haiphong
to northern sector

Denial of supplies from
port area and storage
depots

130 125 45

19

39
616-0003

Aerial Mining
Haiphong Approaches
204712N 1065100E
9 miles - Haiphong

80% loss of water im-
port capability for
support material.
Destroy naval support
for VC

Destroy navy capability
to wage war

Approx 10 btrys
(80 guns) of
medium and light
AA in area

2530 1512 -

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(BE) NUMBER

IDENTIFICATION AND LOCATION

EFFECT OF STRIKE
ON CAPABILITY TO
SUPPORT PL/VCEFFECT OF STRIKE
ON CAPABILITY TO
WAGE WARTARGET SECURITY
INCLUDING AAANUMBER OF BOMBS
(NON-NUC) FOR 85%
PROBABLE DAMAGE
500 750 GAM
lb. or lb. or 83AAnnex to
Appendix B40
0616-0063Hanoi MND Army MZ Hq Bks
and Supply Depot
210200N 105543E
in Hanoi5% reduction of direct
complex support capa-
bilities to PL/VMReduce in-country capa-
bilities probably 5%Probably 16
btrys of light
and medium AAA
weapons in com-
plex

151

185

41
0616-0158Quang Yen Army Bks and
Supply Depot
205649N 1064932E
5 miles north of Halphong

General support only

Loss of 244 and 248 Ind
Inf Regt, total 3,000Probably light
AA

151 183

42
0616-0490Ha Dong Army Bks
205847N 1054742E
5 miles SW Hanoi

Indirect effect only

Possible loss of
308th Inf RegtPossibly light
AAA

1680 1330

43
0616-0271Hanoi Army Bks, S
Quinh Loi
210600N 105511E
2 miles south of Hanoi

Indirect support only

Capability of 308th
Inf Div and 35th
Arty Div would be
reduced.Hanoi city
contains 16
btrys of medi-
um and light
AAA

1680 1330

44
0617-0110Dong Hoi Army Bks WRM
172820N 1063540E
2 miles - Dong HoiStrike would reduce
VC support by major
formation in MR IVWould reduce immediate
PAVN capability to
southProbably light
AAA

1680 1330

45
616-00025Lang Son RR & Highway
Bridge over Son Ky Cung
River
215101N 1064501E
1 mile - Lang SonInterdicts primary
rail and road from
NanningDenial of thru artery
Residual capability
limited for weeks

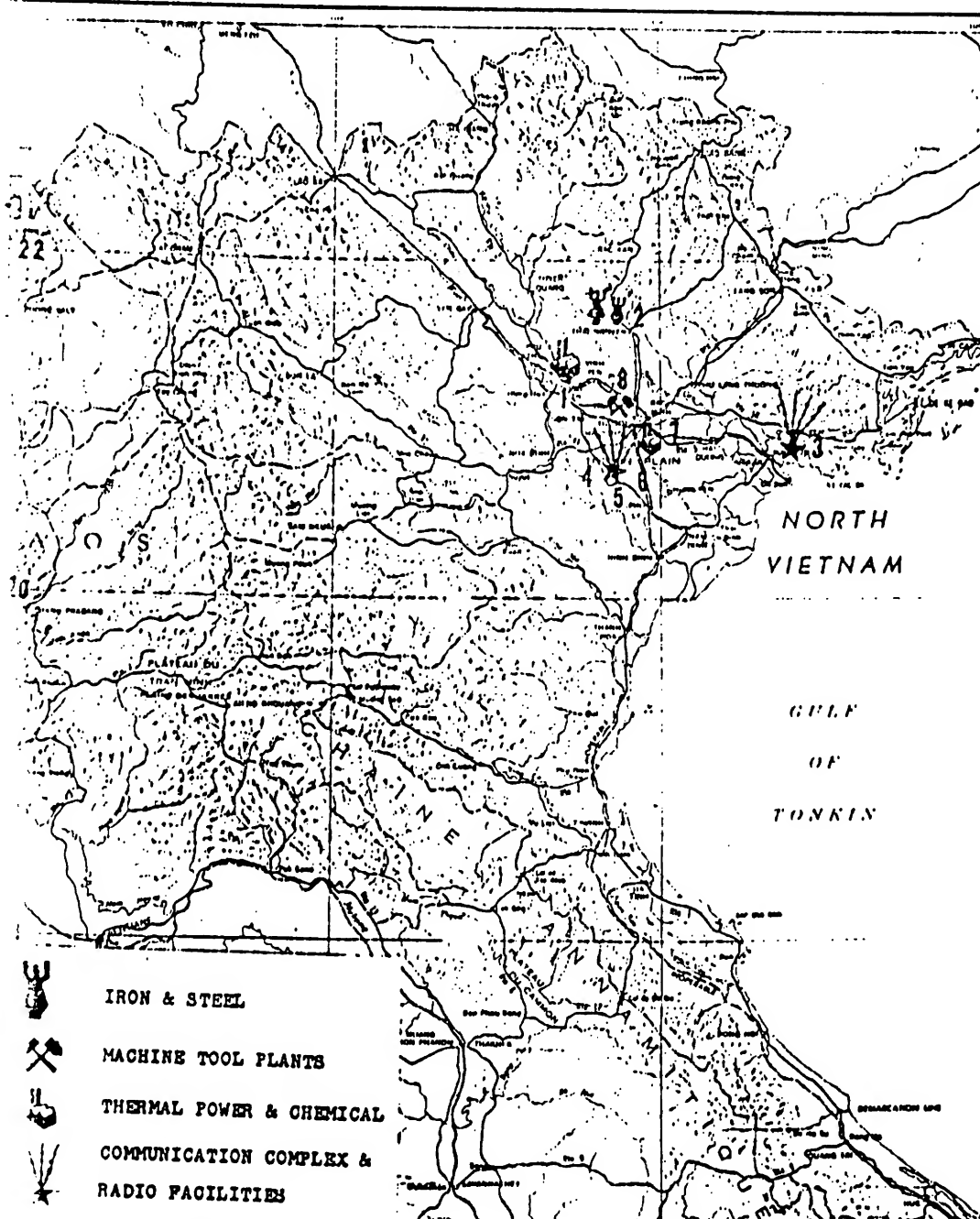
310 215

140

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LOCATION AND ORDER OF CATEGORY C TARGETS



IRON & STEEL

MACHINE TOOL PLANTS

THERMAL POWER & CHEMICAL

COMMUNICATION COMPLEX &

RADIO FACILITIES

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Note: See attached Annex for target analysis.

1947 RV-2

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ANNEX TO APPENDIX C

CATEGORY C TARGETS

ANALYSIS

Annex to
Appendix C

ORDER AND
(BS) NUMBER

IDENTIFICATION AND LOCATION

EFFECT OF STRIKE ON CAPABILITY TO WAGE WAR

TARGET SECURITY
INCLUDING AAA

(NON-NUC) FOR 85%
PROBABLE DAMAGE
500 lb. 750 lb.

1
0616-0198

Viet Tri Chemical Plant
211742N 1052522E
Not near urban area

Plant produces chemicals primarily for non-
military purposes, although may have some
capability of producing explosives and
munitions

No AA identified

360

216

2
0616-0214

Thai Nguyen Iron and Steel
Combine
213342N 1055208E
Not near urban area

Output of this complex is primarily non-
military. However, strike would disrupt
economic development and reduce capability
to wage war

No AA identified

600

350

3
0616-0162

Haiphong Radio CMNC Sta
Intl
205040N 1064152E
1 mile - Haiphong

Slight and temporary reduction of military
capability

About 10 medium
and light AA
btrys

55

42

4
0616-00164

Hanoi Intl Radio Transm
Sta Dai Mo
205850N 1054600E
5 miles - Hanoi

Slight and temporary reduction of military
capability

About 16 medium
and light AA
btrys

55

42

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**ORDER AND
(BE) NUMBER**

IDENTIFICATION AND LOCATION

EFFECT OF STRIKE ON CAPABILITY TO WAGE WAR

**TARGET SECURITY
INCLUDING AAA**

NUMBER OF LOMBS (NON-NUC) FOR 85% PROBABLE DAMAGE	500 lb.	754 lb.
------------------------------------------------------------	---------	---------

Annex to
Appendix C

5
0616-00165

Hanoi Intl Radio Rec Sta
Son Dong 1054132E
210251N
8 miles - Hanoi

Slight and temporary reduction of military capability

About 16 medium and
light AA btrys

55

22

6
0616-00161

Hanol Post TPA A TGR Sta
BO HO
210133N 1055129E
In Hanol

Slight and temporary reduction of military capability

About 16 medium and
light AA btrys

55

42

7
0616-0016

**Eanol Thermal Power Plant
21C235N 1055051E
In Hanol**

Considerable. DRV has shortage of power. Strike would immediately affect communications, hqs operations and material production, disrupt economic development and reduce capability to wage war

Considerable
About 16 Medium and
light AA btrys

30

30

23

8
0616-0261

Hanol MV and Machine Tool
Plant
210002N 1054920E
In Hanol

Strike would have little immediate effect

**About 16 medium and
light AA btrys**

203

145

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ENCLOSURE B

FACTS BEARING ON THE PROBLEM

1. Enemy Air Defense

a. Although the North Vietnamese Air Force does not possess combat aircraft, an Air Force organization does exist which, with the introduction of military aircraft, would have limited combat potential. It is believed that a number of North Vietnamese have received jet pilot training in other communist countries. The Air Force totals about 500 personnel, 25 piston trainers, 40 light piston transports and five helicopters. Fifteen YAK-18s, although classified as trainers, can carry two 11-pound bombs. These trainers could be used also as observation/reconnaissance aircraft. The DRV is reasonably well covered with an early warning radar but the equipment is old and the in commission rate is low. The radar high altitude capability does not exceed 35,000 to 40,000 feet and the capability is extremely limited below 4,000 feet. Hanoi, Haiphong, and Vinh are protected by 85 mm radar controlled AA guns and certain smaller cities by 37 mm and 57 mm guns. Most of the country is relatively undefended.

b. The degree of assistance that would be offered the DRV by the Chinese communists (CHICOMs) and the operational readiness of the CHICOM Air Force is difficult to assess. By redeployment and operating from airfields in South China, Hainan Island and NVN, the CHICOMs could have available for operations about 420 jet fighters and 160 jet light bombers.

2. Friendly Forces

a. Republic of Vietnam (RVN). For the purpose of this study, Vietnamese Air Force (VNAF) forces considered available are limited to one A-1H squadron of 25 aircraft. This

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Enclosure B

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is based on the assumption that other VNAF aircraft will be supporting the counterinsurgency effort in RVN.

b. US Forces are those US Air Force and US Naval aircraft listed in CINCPAC OPLAN 37-64. These aircraft can be in position in 24 hours.

3. The following is a list of available strike aircraft and sortie capability:

	Type	Location	Number	Daily Sortie Rate	Combat Radius of Action	
VNAF	A-1H	Bien Hoa/ Da Nang	1 Sqn 25	*18	561	8 9
FARM GATE	B-57	Tan Son Nhut	1 Sqn 24	*17	824	10 11
	B-57	Clark/AB/SEA	1 Sqn 24	*17	824	12
USAF	F-105	Korat	1 Sqn 18	*13	776	13
	F-100	Takhli	1 Sqn 18	*13	541	14
	F-100	Clark AB/SEA	2 Sqns 36	*26	541	15
NAVY/ USMC	A-4C	CVA	2 Sqns 24	**2.12	515	16 17
	A-1H	CVA	1 Sqn 12	*1.41	561	18
	A-3B	CVA	1 Sqn 12	*1.5	1,000	19

- * Sortie rate 21 per month per aircraft (normal wartime planning factor)
** Sortie rate per aircraft per operating day (20 operating days per month)

Note: The above represents aircraft now available and does not consider additional A-1 aircraft programmed for VNAF and FARM GATE, nor does it provide for additional TAC/SAC and naval forces that could be made available.

4. By separate action,* CINCPAC was requested to submit recommendations for consolidation and/or elimination, as may be practicable, of his unilateral contingency plans for Laos and North Vietnam. He has recommended** that those overt actions in OPLANS 33, 34-A, 98 and 98-A be consolidated into OPLAN 37 if not already included, and that OPLAN 33 be consolidated into OPLAN 99.
5. Of the 91 targets listed in this study 85 per cent are contained in CINCPAC OPLANS.

JCS msg to CINCPAC, JCS 6338, DTG 161825Z May 64
** CINCPAC msg to JCS, DTG 230306Z May 64; on file in Joint Secretariat

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ENCLOSURE C

DISCUSSION

1. Considering the retaliatory capability of the DRV/CHICOM forces and the lack of air defense in RVN, appropriate air defense units must be deployed to Southeast Asia in the event the decision is made to carry out air operations in NVN.

2. Target selectivity has been designed to:

a. Demonstrate clearly the risk involved in Hanoi's continuing support of the insurgency in Laos and RVN.

b. Prevent any attempt by the DRV to escalate or broaden the scope of the conflict in both Laos and RVN.

c. Destroy the industrial as well as the military base of NVN to the extent necessary to cause the DRV to cease support of activities in Laos and RVN.

3. Three categories of targets and an order of targets within each category have been developed for this purpose:

Category A - are those targets the destruction of which would bring about a reduction of DRV support of PL and VC actions in Laos and RVN, Appendix A to Enclosure A.

Category B - are those targets the destruction of which would reduce the DRV military capability to take action against Laos and RVN, Appendix B to Enclosure A.

Category C - significant industrial targets, the destruction of which would effectively destroy the NVN industrial base.

4. The target lists appended to Enclosure A were submitted* to CINCPAC for his comments. He replied** that eighty-five per cent of the targets that are included in current CINCPAC OPLANS 33-64, 34-64, 37-64 and 99-64. These are complete and detailed plans which include target folders,

* JCS Msg DTG 211911Z May 64
** CINCPAC Msg DTG 221840Z May 64

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provision for command and control, logistics and C & E. It is 1
recognized that some targets may change, and additional targets 2
can be selected as intelligence dictates. Air strikes in NVN 3
should be conducted within the framework of these fully staffed 4
and JCS approved plans for operations in Southeast Asia. 5

5. It is difficult to estimate the time required to attack 6
all of the targets in each category and attain an 85 per cent 7
probability of destruction due to vagaries of weather, terrain, 8
difficulty of target identification, maintenance and replace- 9
ment of aircraft and other variables that accompany an operation 10
of this nature. Subject to the reservations listed, it is 11
estimated that it would take: 12

a. VNAF, seven plus months for Category A targets alone.

However, it is doubtful that the current resources of the 13
VNAF (pilots, pilot training, logistics base, and aircraft 14
availability) are such that continuous combat operations 15
of the order envisioned could be maintained for the period 16
set forth. 17

b. VNAF and FARM GATE B-57s: Category A targets - two 18
plus months. 19

c. VNAF and FARM GATE plus USAF/USN aircraft readily 20
available (as listed in CINCPAC OPLAN 37-64): Category A 21
targets - 12 days; all categories - 46 days. 22

d. In the event a decision is made to strike a decisive 23
blow against NVN, a substantial reduction in time can be 24
achieved by deploying three additional tactical fighter 25
squadrons to Southeast Asia and utilizing those SAC forces 26
(60 B-47s and 30 B-52s) listed in JSCP for contingency 27
plans. With the addition of this force, all targets could 28
be effectively destroyed in 22 days. 29

e. To sustain the 85 per cent probability of destruction 30
to airfields, roads, railways, bridges and other facilities 31

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Enclosure C

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which can be repaired rapidly, restrikes would have to be conducted for an indeterminate period.

6. Air operations can be conducted against any of the targets on the attached list. The intensity of execution can range from selective strikes in an ascending order of gradually increasing military pressure to a concentration of effort designed to attain a sudden blow effect. From a military viewpoint, it is considered that the most effective application of military force will result from a sudden sharp blow in order to bring home the penalties for violation and the intent of the United States to bring a cessation of DRV support of the insurgency in Laos and RVN. In any case, prior to conducting air strikes against NVN, leaflet drop missions should be flown. Leaflets should warn the civilian population that a designated target is to be attacked and that they should evacuate the target area.

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Enclosure C



ENCLOSURE A

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THE JOINT CHIEFS OF STAFF
WASHINGTON, D.C. 20301

JCSM-729-64
24 August 1964

MEMORANDUM FOR THE SECRETARY OF DEFENSE

Subject: Target Study - North Vietnam (S)

1. The Joint Chiefs of Staff have conducted a detailed study of targets in North Vietnam (NVN) suitable for air attack utilizing readily available forces to conduct air operations in the event a policy decision is made to conduct combat operations against the Democratic Republic of Vietnam (DRV).
2. The selected targets in the DRV identified in Appendix A hereto provide a list of the most significant identified targets by type that are considered most critical to the DRV support of insurgency operations, DRV military capabilities, and industrial output. The purpose of air attacks against these targets would be to cause the DRV to desist from supporting the Pathet Lao (PL) and Viet Cong (VC) and to reduce the will and capability of that Government to renew any such support. This paper provides a series of target information and strike data studies, including the detailed analysis of each target and examples of possible weapons and sortie requirements to achieve a desired damage objective for each target, and indicates the capabilities of forces readily available.

3. The most significant identified targets in NVN have been selected and grouped into five basic categories. Photographs, descriptions, strike data, and other pertinent information for each target are provided in Appendix A and the Annexes thereto.

Category A - Airfields.

Category B - Lines of Communications (bridges, railroad yards, and shops).

Category C - Military Installations (military barracks/headquarters, ammunition depots, POL storage, supply depots, communications facilities, and port facilities).

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Enclosure A

(Revised by Decision - 24 August 1964)

GROUP 1
Excluded from automatic
downgrading and
declassification

DECLASSIFIED BY AUTHORITY OF

Joint Staff
11 APR 96
DATE

93-F-1825
CASE #

OATSD(PA)DFOISR	
TOP SECRET CONTROL	
Copy No.	1
Case No.	93-F-1825
T.S. No.	94-15-304
Document No.	4

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Category D - Industrial Installations.

Category E - Route Armed Reconnaissance.

4. The targets listed in this study have been weaponized to provide examples of possible weapons and estimated number of sorties required to obtain the damage objective. Selection of specific ordnance will depend, inter alia, upon the availability of ordnance types at the operating locations. In this regard, the availability of ordnance types in PACOM, while deficient in numbers of 2000# bombs, Snakeye Kits for MK-81 bombs, and MLU-10B mines envisaged in this study, is adequate to accomplish the actions desired without necessity for the types of ordnance now deficient. Some in-theater relocation of PACOM stocks may be required or movement of certain deficient types of ordnance from CONUS may be desirable.

Pre-stockage of POL in Thailand is adequate to initiate actions; however, pre-stockage at selected operating locations in Vietnam will be required in addition to programming replenishment of POL stocks for all locations.

PACOM operations plans being developed on this target data base will show ordnance and POL stocks required by location and movement necessary prior to implementation.

5. A reconnaissance concept for adequate coverage of the target system in the DRV is provided in Appendix B hereto.

6. The Joint Chiefs of Staff, in reviewing the force requirements to conduct air strikes on selected targets in the DRV, have based their computations on levels of expected damage, which experience has shown to be those required to meet the desired damage objectives in the most economical way. With regard to availability of aircraft, it was assumed that only the Vietnamese Air Force and US FARM GATE aircraft that could be diverted from the counterinsurgency effort, and those US forces listed below that are scheduled for deployment in CINCPAC OPLAN 37-64 as updated, would be utilized.

7. The following is a list of available aircraft and sortie capability:

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Enclosure A

(Revised by Decision - 24 August 1964)

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	<u>TYPE</u>	<u>LOCATION</u>	<u>NUMBER</u> ^{1/}	<u>DAILY SORTIES</u>
VNAF	A1H	SEA	1 Sq (18 A/C)	* 13
FARM GATE	A1E	SEA	1 Sq (18 A/C) ^{2/}	* 13
USAF	B-57	SEA	2 Sq (45 A/C)	* 32
	F-105	SEA	1 Sq (18 A/C)	* 13
	F-100	SEA	3 Sq (54 A/C)	* 38
USN/USMC	A4C	CVA	2 Sq (24 A/C)	** 24
	A1H	CVA	1 Sq (12 A/C)	** 8
	A3B	CVA	1 Sq/Dot (3-12 A/C) ^{3/}	**2-8
	A4C	SEA	1 Sq (20 A/C)	** 20
	F4B	SEA	1 Sq (15 A/C)	** 10

- * Sortie rate 21 per month per aircraft (normal wartime planning factor).
** Total sorties generated during 20 operating days per month divided by 30 days provides sortie rate.

^{1/} The above represents aircraft that can be made readily available and does not include additional PACOM/STRICOM/SAC forces that could be made available.

^{2/} COMUSMACV states that requirements for strike support of ARVN will exceed VNAF/FARM GATE capability for at least the remainder of the calendar year. If, however, a decision is made to utilize FARM GATE A1Es in the DRV strike program, the following is a cumulative strength by month:

JUL	AUG	SEP	OCT	NOV	DEC
12	26	30	39	48	50

70 per cent of the above aircraft can be made available if required. This represents total anticipated operationally ready aircraft.

^{3/} Number of A3Bs embarked varies with CVA class.

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Enclosure A

(Revised by Decision - 24 August 1964)

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8. Using the appended target list as a nucleus of targets, CINCPAC has been directed to develop and submit strike plans for four patterns of attack in ascending order of severity against the DRV as follows:

a. Demonstrative strikes against a few military targets to show US readiness and intent to pass to alternatives b, c, or d, below.

b. An attack on some significant part of the military target system in the DRV for the dual purpose of convincing the enemy that it is to his interest to desist from aiding the VC and PL and, if possible, of obtaining his cooperation in calling off the insurgents in the RVN and Laos.

c. An air campaign against significant military targets in the DRV with the objective of destroying them and, with them, the DRV capabilities to continue military support to the VC and PL.

d. A full-scale air campaign against significant military and industrial targets in the DRV with the objective of destroying them and, with them, the DRV will and capabilities to continue assistance to the VC and the PL.

9. CINCPAC, in developing strike plans for the four patterns of attack outlined above, will apply, as appropriate, three types of forces to each pattern: VNAF only; VNAF plus FARM GATE; and VNAF/FARM GATE plus USAF/USN/USMC aircraft as deployed in CINCPAC OPLAN 37-64, as updated. The time required for accomplishing these attacks will vary from one to two days in the case of 8 a, above, and to several weeks for alternative 8 d.

10. In the event a decision is made to strike a major blow against the DRV, a substantial reduction of time can be achieved by deploying additional tactical fighter squadrons (US Air Force and US Marine Corps) and an additional CVA group to Southeast Asia and utilizing those SAC forces listed in the Joint Strategic Capabilities Plan for contingency plans.

11. Air operations can be conducted against any of the targets on the attached list. The intensity can range from selective strikes in ascending order of gradually increasing military pressure to a full-scale air campaign against significant military and industrial targets.

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(Revised by Decision - 24 August 1964)

Enclosure A

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12. From a military viewpoint, it is considered that the most effective application of military force will result from a sudden sharp blow in order to bring home the penalties for violating international agreements and the intent of the United States to bring a cessation of DRV support of the insurgency in Laos and the RVN.

13. Reconnaissance coverage of the target system (to include low-level aerial photography) should be accomplished as required to update information. Where feasible and without prejudicing the security of our own forces, leaflet missions could be flown, warning the civilian population that certain targets or target categories are to be attacked and that the areas adjacent thereto should be evacuated to preclude civilian casualties. In addition, antiaircraft suppression sorties should be executed, as appropriate, immediately preceding air strikes to increase survivability of attacking aircraft.

14. The Joint Chiefs of Staff have approved this target list as a target data base for use in current military planning.

For the Joint Chiefs of Staff:

SIGNED

CURTIS E. LEMAY
Acting Chairman
Joint Chiefs of Staff

Attachments

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Enclosure A

(Revised by Decision - 24 August 1964)

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APPENDIX B TO ENCLOSURE A

AERIAL RECONNAISSANCE CONCEPT

(2 pages)

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JCS 2345/283-2

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Appendix B to
Enclosure A

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APPENDIX B

AERIAL RECONNAISSANCE CONCEPT

1. This aerial reconnaissance concept of operations, as generally reflected in CINCPAC OPLAN 37-64, is considered appropriate for the targets contained in this study. Further details will be introduced in operational strike plans at appropriate level.

2. Concept

a. USAF RF-101 will direct their reconnaissance efforts toward North Vietnam paying particular attention to inland waterways, airfields, selected pinpoint and area targets, and infiltration routes to northern Laos. Periodic examination of northern parts of Laos and North Vietnam to obtain early indication of a CHICOM build-up or development of a CHICOM FARM GATE operation for the DRV will be emphasized.

b. The VNAF aerial reconnaissance capability and a portion of the USAF RF-101 force will continue to direct their main efforts toward the previously instituted border control reconnaissance operations. Similarly, in border control operations, USAF RB-57s will augment the daylight reconnaissance capability of the VNAF and USAF RF-101s, with a night capability to provide for twenty-four hour coverage. This will continue to ensure adequate high and low level visual and photographic coverage of contiguous RVN border areas, including the border to North Vietnam, to ascertain movement and confirm disposition of VC elements.

c. US Navy RF-8A and RA-3B of the CVA group, within capabilities and without detriment to fleet missions, will undertake day/night reconnaissance of North Vietnam coastal areas and ports to obtain intelligence for aerial mining, and other specified targets to obtain early knowledge of any CHICOM augmentation of the DRV Forces.

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d. Forces available in CINCPAC OPLAN 37-64 for aerial
reconnaissance are: 1
2
3 VNAF T-28C (less those on loan to RLAF). 3
4 VNAF RT-28D (less those on loan to RLAF). 4
5 VNAF RC-47 5
6 USAF RF-101 6
7 USAF RB-57 7
8 USN RF-8A 8
9 USN RA-3B 9
e. Reconnaissance coverage of the target system (to 10
include low level aerial photography) should be accomplished 11
as required to update target information. 12

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Appendix B

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ENCLOSURE B

FACTS BEARING ON THE PROBLEM

1. Enemy Air Defense

a. Although the North Vietnamese Air Force does not have a combat air capability, an Air Force organization does exist which, with the introduction of military aircraft, would have limited combat potential. It is believed that a number of North Vietnamese have received jet pilot training in other communist countries. The Air Force totals about 500 personnel, 25 piston trainers, 40 light piston transports and five helicopters. These trainers could also be used as observation/reconnaissance aircraft. The DRV is reasonably well covered with early warning radar, but the equipment is old, and the in commission rate is low. It is likely that the radar high altitude capability does not exceed 35,000 to 40,000 feet. Hanoi, Haiphong and Vinh are protected by 85 mm radar controlled AA guns and certain smaller cities by AA machine guns, 37 mm and probably some 57 mm AA guns. The important ports and populated areas are AA defended as well as points along the coastal highway and interior routes.

b. The degree of assistance that would be offered the DRV by the Chinese communists (CHICOMS), and the operational readiness of the CHICOM Air Forces is difficult to assess. By redeployment and operating from airfields in South China, Hainan Island and the DRV, the CHICOMS could have available for operations about 420 jet fighters and 160 jet light bombers, and 40 prop light bombers.

2. Friendly Forces

a. Air Defense. Present radar and communications systems installed in RVN as the Tactical Air Control System and as tied into the radar network in Thailand provide a limited

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Enclosure B

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ground environment for conduct of air defense operations.

However, it lacks sufficient early warning capability in the northern area of the RVN. Initial aerial defense will be provided by positioning 18 F-102s in SEA. In addition, offensive strikes will be conducted against those bases included in the target list for the DRV from which Chinese communist Air Force (CCAF) might be launched. Additional forces, including mobile radars and controllers will be alerted for immediate deployment as required. USN fleet defense will be provided by Tank Group and carrier based air defense aircraft.

b. Republic of Vietnam (RVN). For the purposes of this study Vietnamese Air Force (VNAF) forces considered available are limited to one A1H squadron containing 18 aircraft. The FARM GATE force considered available is one A1E squadron containing 18 aircraft. This is based on the assumption that the other VNAF and FARM GATE aircraft will be supporting the counterinsurgency effort in RVN. Precise VNAF and FARM GATE forces which can be withdrawn from counterinsurgency operations and made available for strikes against DRV will depend primarily upon the Pacification requirements at the time of execution. The VNAF/FARM GATE force structure was determined in the context of Pacification requirements. VNAF aircraft in less than squadron strength might be committed on irregular basis to specific strikes for short periods. Greater numbers could not be made available before October. For this study it was assumed that 18 VNAF aircraft could be made available for short periods of time.

c. US Forces. These forces are those US Air Force, US Navy and US Marine aircraft available as listed in Appendix III to Annex A of CINCPAC OPLAN 37-64 as updated.

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d. The following is a list of the strike aircraft
and sustained sortie capability.

	TYPE	LOCATION	NUMBER 1/	DAILY SORTIES	
VNAF	A1H	SEA	1 Sq (18 A/C)	*13	3
FARM GATE	A1E	SEA	1 Sq (18 A/C) 2/	*13	4
USAF	B-57	SEA	2 Sq (45 A/C)	*32	5
	F-105	SEA	1 Sq (18 A/C)	*13	6
	F-100	SEA	3 Sq (54 A/C)	*38	7
USN/USMC	A4C	CVA	2 Sq (24 A/C)	**24	8
	A1H	CVA	1 Sq (12 A/C)	** 8	9
	A3B	CVA	1 Sq/Det (3-12 A/C) 3/	**2-8	10
	A4C	SEA	1 Sq (20 A/C)	**20	11
	F4B	SEA	1 Sq (15 A/C)	**10	12

* Sortie rate 21 per month per aircraft (normal wartime
planning factor).

** Total sorties generated during 20 operating days per
month divided by 30 days provides sortie rate.

- 1/ The above represents aircraft that can be made readily
available, and does not include additional PACOM/STRICOM/
SAC Forces that could be made available.
- 2/ COMUSMACV states that requirements for strike support
of ARVN will exceed VNAF/FARM GATE capability for at
least the remainder of the calendar year. If, however,
a decision is made to utilize FARM GATE A1Es in DRV
strike program, following is cumulative strength by month:

JUL	AUG	SEP	OCT	NOV	DEC	
12	26	30	39	48	50	26

70 per cent of the above aircraft can be made available
if required.

This represents total anticipated operationally ready
aircraft.

- 3/ Number of A3Bs embarked varies with CVA class.

3. By separate actions CINCOPAC was directed to develop
and submit strike plans for four patterns of attack in
ascending order of severity against the DRV as follows:

- a. Demonstrative strikes against a few military targets
to show US readiness and intent to pass to alternatives b,
c or d below.

2 JCS msgs to CINCPAC, JCS 6800, DTG 162144Z Jun 64; JCS 6809,
DTG 221603Z Jun 64; and JCS 7220, DTG 022116Z Jul 64

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- b. An attack on some significant part of the military target system in DRV for the dual purpose of convincing the enemy that it is to his interest to desist from aiding the VC and PL and, if possible, of obtaining his cooperation in calling off the insurgents in RVN and Laos.
- c. An air campaign against significant military targets in DRV with the objective of destroying them and with them DRV capabilities to continue military support to the VC and the PL.
- d. A full scale air campaign against significant military and industrial targets in DRV with the objective of destroying them and with them DRV will and capabilities to continue assistance to the VC and the PL.
4. The targets listed in this study will provide the nucleus of targets upon which the CINCPAC strike plans mentioned in paragraph 3 above will be based.

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Enclosure B

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ENCLOSURE C

DISCUSSION

1. Although the DRV has a very limited combat air capability it can be augmented with CHICOM resources. Therefore, appropriate air defense units must be deployed to Southeast Asia in the event the decision is made to carry out air strikes against the DRV.
2. The most significant targets in the DRV were selected for the purpose of:
 - a. Demonstrating clearly the risk involved in DRV's continuing support of the insurgency in Laos and RVN.
 - b. Preventing any attempt by the DRV to escalate or broaden the scope of the conflict in both Laos and RVN.
 - c. Destroy the industrial as well as the military base of the DRV to the extent necessary to cause the DRV to cease support of activities in Laos and RVN.
4. Five basic categories or types of targets have been developed:
 - Category A - Airfields
 - Category B - Lines of Communications (bridges, railroad yards and shops)
 - Category C - Military Installations (military barracks/ headquarters, ammunition depots, POL storage, supply depots communications facilities, port facilities)
 - Category D - Industrial Installations
 - Category E - Armed Reconnaissance Routes
5. The targets appended to Enclosure A have been approved by CINCPAC and will be considered in formulating CINCPAC strike plans. It is recognized that targets are constantly being added/ deleted based on intelligence and analysis. As a target is added, target folders are automatically prepared by CINCPAC component commands. Air strikes in the DRV should be conducted

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within the framework of fully staffed and JCS approved CINCPAC OPLANS for operations in Southeast Asia.

6. It is difficult to estimate the time required to conduct strikes on all targets in each category. Vagaries of weather, terrain, difficulty of target identification, maintenance and replacement of aircraft, and other operational variables will affect the time required to conduct operations of this nature.

7. CINCPAC in developing strike plans for four patterns of attack against the DRV (i.e., [a] demonstrative strikes; [b] an attack on some significant part of the military target system; [c] an air campaign against significant military targets; and [d] a full scale air campaign against significant military and industrial targets) will use the attached target list as a nucleus for planning. Three types of forces will be applied as appropriate to each pattern: VNAF alone; VNAF stiffened with FARM GATE; and VNAF with FARM GATE plus USAF/USN/USMC aircraft available (as listed in CINCPAC OPLAN 37-64 as updated). The time required for accomplishing these attacks will vary from one to two days in the case of 7[a] to several weeks for alternative 7[d].

8. The VNAF capability, based on probable available aircraft and sortie generation capability, is not deemed adequate for conducting a massive or significant strike. The capability and availability is adequate for demonstrative strikes only.

9. In the event a decision is made to strike a decisive blow against the DRV, a substantial reduction of time can be obtained by deploying additional tactical fighter squadrons (USAF and USMC) and an additional CVA group to Southeast Asia, and utilizing those SAC forces listed in the JSCP for contingency plans.

10. To sustain the level of damage achieved in the initial strikes, restrikes would have to be continued for an indeterminate period.

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11. Air operations can be conducted against any of the
targets on the attached list. The intensity of execution can
range from selective strikes in an ascending order of gradually
increasing military pressure to a full scale air campaign
against significant military and industrial targets. From a
military viewpoint, it is considered that the most effective
application of military force will result from a sudden sharp
blow in order to bring home the penalties for violation of
international agreements and the intent of the United States
to bring a cessation of DRV support of the insurgency in
Laos and RVN.

12. Reconnaissance coverage of the target systems (to in-
clude low level aerial photography) should be accomplished
as required to update target information. Where feasible and
without prejudicing the security of our own forces, leaflet
missions could be flown warning the civilian population that
certain targets or target categories are to be attacked and
that the areas adjacent thereto should be evacuated to pre-
clude civilian casualties. In addition, anti-aircraft sup-
pression sorties should be executed, as appropriate,
immediately preceding air strikes to increase survivability of
attacking aircraft.

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REVISION OF APPENDIX A TO ENCLOSURE A.

TO

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APPENDIX A

TARGET STRIKE DATA

1. ~~(S)~~ The attached list contains targets within four basic categories (Category E has been deleted).

Category A - Airfields.

Category B - Lines of Communication (bridges, railroad yards and shops, and ferries).

Category C - Military Installations (military barracks/ headquarters, ammunition depots, POL storage, supply depots, communications facilities, and naval bases/port facilities/ mineable areas).

Category D - Industrial Installations.

2. ~~(S)~~ Rationale for target selection, including desired damage level and probability of achieving this damage level, follows:

a. Category A - Airfields

All airfields with hard surfaced runways and fixed support facilities. Fifty percent probability of achieving 30 percent damage to above-ground facilities.

b. Category B - Lines of Communication

(1) Bridges

Bridges in North Vietnam (NVN) which are the key interdiction points along all the main rail and highway routes and along most of the secondary routes. Eighty-five percent probability of collapsing one span.

(2) Railroad Yards and Shops

All significant railroad yard and shops in NVN. Damage to these installations would seriously hamper rail operations. Fifty percent probability of achieving 12 percent damage (yards); 50 percent probability of achieving 30 percent damage (shops.)

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c. Category C - Military Installations

(1) Military Barracks/Headquarters

All major military barracks and headquarters in NVN. Due to the difficulty of accurately locating military headquarters as separate targets, they are included as collocated targets within the barracks areas whenever appropriate. Fifty percent probability of achieving 30 percent damage to all above ground facilities.

(2) Military Supply and Ammunition Depots

All major military supply and ammunition depots in NVN or those which, because of their location near the Laotian or RVN border, are capable of providing direct support to the Pathet Lao and Viet Cong. Fifty percent probability of achieving 30 percent damage to storage and major support facilities.

(3) POL Storage

All major bulk storage facilities in NVN and dispersed storage facilities with a capacity of 1,000 metric tons or more. Fifty percent probability of achieving 70 percent damage (bulk); 50 percent probability of achieving 30 percent damage (dispersed).

(4) Naval Bases, Port Facilities, and Mineable Areas

Port facilities in NVN which handle most of the maritime traffic and naval bases at which units of the NVN Navy are based. In addition to these ports and naval bases, six approaches have been targeted as mineable areas. Fifty percent probability of achieving 30 percent damage to operational and support facilities (ports/bases); 30 percent probability of achieving moderate damage to a single ship (mineable area).

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(5) Communications Facilities

All key communications facilities in NVN. The loss of these facilities would significantly impair government controls, both political and military, and would have an adverse psychological effect on the populace. Fifty percent probability of achieving 70 percent damage to control buildings and generator facilities.

(6) Surface-to-Air Missile (SAM) Support Facilities

All major, fixed, SAM support facilities. Fifty percent probability of achieving 30 percent damage.

d. Category D - Industrial Installations

All significant electric power facilities in NVN and the principal steel, chemical, machine tool, and fertilizer plants. Fifty percent probability of achieving 30 percent damage to production facilities or transformers (factories/transformer stations); 50 percent probability of achieving 70 percent damage to boilers and transformers (power plants).

e. Definitions

a. BASIC ENCYCLOPEDIA (B.E.) is a compilation of installations and physical areas of potential significance as objectives for attack within certain specified categories. The B.E. is published annually.

b. BASIC ENCYCLOPEDIA NUMBER (B.E. Number) identifies a target installation. The first part of the number indicates the number of the World Area Code (WAC) which identifies the area within which the installation is located. The second part is an identification number for the installation itself. The B.E. Number is the most widely accepted and most stable target identifier. Requests for the assignment of B.E. Numbers are generated by the unified and

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specified commands and by the Defense Intelligence Agency (DIA) analysts. DIA assigns numbers to approved requests and places them in the intelligence system.

c. DESIRED MEAN POINT OF IMPACT (DMPI) is that point on the target about which it is desired to center the bombfall.

d. CIRCULAR ERROR PROBABLE (CEP) is the radius of a circular area around the DMPI within which, on an average, 50 percent of the bombs would fall. Any single bomb would be as likely to fall within the CEP as beyond it.

e. DEFLECTION ERROR PROBABLE (DEP) is the distance from the DMPI to either of two lines parallel to the axis of attack between which, on the average, 50 percent of the bombs would fall.

f. RANGE ERROR PROBABLE (REP) is the distance from the DMPI to either of two lines perpendicular to the axis of attack between which, on the average, 50 percent of the bombs would fall.

g. DAMAGE OBJECTIVE is the purpose to be satisfied or the goal to be achieved in attacking a target. For example, the damage objective in attacking an airfield may be interdiction of flying operations for a specified period.

h. DAMAGE CRITERION is a damage standard established as the basis for judging the fulfillment of a specified damage objective. For example, the damage objective may be interruption of operations of an integrated steel plant for 6 months. The damage criterion chosen on this basis may be collapse and rupture of coke-chemical gas mains. The probability of accomplishing the objective is therefore considered to be the probability of at least collapsing

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and rupturing the coke-chemical gas mains. Associated with this may be other damage which will contribute to the objective, such as overturning of blast furnace superstructure, destruction of power plant boilers, structural damage to mill buildings, etc.

1. EXPECTED DAMAGE is the amount of damage to be expected on the average. Sometimes more damage will be accomplished, sometimes less. Thus, expected damage is the average value expected in the long run from a number of trials; it is not the damage to be expected in any one trial.

J. DAMAGE LEVEL is an expression of the extent of damage to a target or a target system. The damage may be measured in terms of structural damage to buildings, production loss, casualties, inventory, or other appropriate terms. The damage level is usually expressed in terms of percent of the original target. For example, the damage level at an airfield may be expressed as 50 percent of the aircraft severely damaged; at a port, 30 percent of the warehouses structurally damaged, etc.

K. COLLATERAL DAMAGE is damage to facilities or resources outside the planned target area. In this study, civilian/military casualties are also listed under the general heading COLLATERAL DAMAGE.

1. PROBABILITY OF ACHIEVING DAMAGE LEVEL is expressed in percent and indicates the proportion (or percent) of successes expected in a large number of trials.

4. ~~CEPs~~

a. Unguided ordnance requirements for each target for dive/glide bombing are computed on a combat CEP of 200 feet.

b. Ordnance requirements for the GAM 83A (AGM-12B/BULLPUP) are computed on a 60-foot CEP.

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c. Ordnance requirements for low altitude level deliveries are computed on a 30-foot DEP and a 100-foot REP.

d. Ordnance requirements for rockets are computed on a 26-mil CEP and for strafing runs on a 16 mil CEP. The open-fire point for rocket salvos is calculated as 3,000 feet and for strafing as 2,000 feet.

e. Ordnance requirements for laser-guided, electro-optical guided, and other internally guided weapons are computed on a 15-foot CEP.

5. ~~(S)~~ Operational Factors

a. The sorties required for each target are based on aggregated operational factors, nominal bomb load, and a nominal radius of operations. Detailed planning, using positioned forces, refined operational factors, and actual bomb load, will result in more specific requirements. Sortie requirements reflected were developed using Joint Strategic Target Planning Staff (JSTPS) planning factors for aircraft reliability and weapon reliability. The following formula (with factors) was used: weapon system reliability (.90) x weather-darkness factor (.94)* x penetration probability (.98) x prelaunch survival probability (1.0) = weapon delivery probability of .82. This factor is considered moderately conservative for US Forces and, by the same token, slightly optimistic for Vietnamese Air Force (VNAF) forces. However, in consideration of the many variables involved, it is considered to be an applicable figure for planning computations.

* It was assumed that sorties would be launched only when forecast weather would permit execution of the planned delivery tactic. The .06 reflects an estimate of percentage of times that actual weather will be less than forecast.

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b. The aircraft weapon load used to compute required sorties over target in this study is based on an average of the carrying capabilities of the type forces available using a 400-450 nautical mile average radius of operation. Weapons loading would be significantly altered using positioned forces and specific types of aircraft. In addition, mixed weapon loads were not considered because of the many combinations and permutations possible. Detailed planning by operational commanders would include optimum load requirements and type ordnance, as appropriate. The sortie requirements reflected in the target data studies are based on one of the nominal weapon loads listed below.

- (1) Twelve 250 lb bombs or MK-81 SNAKEYE.
- (2) Nine 500 lb bombs.
- (3) Six 750 lb bombs.
- (4) Three 1,000 lb bombs.
- (5) One 2,000 lb bomb.
- (6) Six 5" ZUNI LAU-10A Pods (four rounds per pod).
- (7) 500 rounds 20mm.
- (8) Two GAM-83A (AGM-12B/BULLPUP).

c. VNAF sortie generation capability was computed at 1.0 sortie per day per operational ready aircraft (70 percent). US Forces sortie generation rates were determined using standard planning factors.

6. ~~()~~ Formula for determining overall population totals:

- a. Each individual house: six persons.
- b. Shop/houses (combination store/shop and house): eight persons.

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c. Industrial housing (barracks or dormitory-type housing associated with industry): 100 persons.

d. Small industry (similar to size of one warehouse): 40 persons.

e. Medium industry: 200 to 400 persons.

f. Large industry: 1000 to 2000 persons.

7. ~~(a)~~ Formula for estimated civilian casualties:

a. Within the target area: 60 percent of civilian population (nonalert)--6 percent (alert).

b. Outside the target area but within the 600-ft zone (three CEPs) immediately adjacent to the target area: 10 percent of civilian population (nonalert) - 1 percent (alert).

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Appendix A

8. The attached Annexes and Tabs provide pertinent information on each of the selected targets listed below. The target name is the name generally used in Joint Staff papers; it is a shortened, standardized version of the name reflected in the Basic Encyclopedia.

TGT #	BE #	NAME	ANNEX	TAB	
*1	616-8420	Na San AF	A	A	<u>1</u>
*2	616-8418	Dien Bien Phu AF	A	B	<u>2</u>
3	616-8408	Hanoi/Gia Lam AF	A	C	<u>3</u>
*4	617-8400	Dong Hoi AF	A	D	<u>4</u>
*5	617-8412	Vinh AF	A	E	<u>5</u>
*6	616-8520	Phuc Yen AF	A	F	<u>6</u>
*7	616-8407	Hanoi/Bac Mai AF	A	G	<u>7</u>
*8	616-8405	Haiphong/Cat Bi AF	A	H	<u>8</u>
*9	616-8433	Haiphong/Kien An AF	A	I	<u>9</u>
*9.1	616-8438	Kep AF	A	J	<u>10</u>
*9.11	616-8485	Kep Ha AF	A	K	<u>11</u>
*10	616-0477	Ninh Binh RR/Hwy Br	B	A	<u>12</u>
*11	616-0020	Ha1 Duong RR/Hwy Br W	B	B	<u>13</u>
*12	616-0012	Hanoi RR/Hwy Br Red R	B	C	<u>14</u>
*13	616-0011	Hanoi RR/Hwy Br Canal	B	D	<u>15</u>
*14	617-0002	Thanh Hoa RR/Hwy Br	B	E	<u>16</u>
*15	616-0017	Viet Tri RR/Hwy Br	B	F	<u>17</u>
*16	616-0023	Dap Cau RR/Hwy Br	B	G	<u>18</u>
*17	616-0332	Haiphong Hwy Br	B	H	<u>19</u>
*18	616-0025	Lang Son RR/Hwy Br	B	I	<u>20</u>
*18.1	617-0018	Dong Hoi Hwy Br	B	J	<u>21</u>

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TGT #	BE #	NAME	ANNEX	TAR	
*18.11	617-0631	My Duc Hwy Br	B	K	<u>1</u>
*18.12	617-0259	Xom Phuong Hwy Brs	B	L	<u>2</u>
*18.13	617-0515	Kim Cuong Hwy Br SW	B	M	<u>3</u>
*18.14	617-0722	Khe Kien Hwy Br W	B	N	<u>4</u>
*18.15	617-0622	Bai Duc Thon Hwy Br NW	B	O	<u>5</u>
*18.19	617-0514	Kim Cuong Hwy Br W	B	S	<u>6</u>
*18.2	617-0171	Thanh Yen Hwy Br	B	T	<u>7</u>
*18.21	616-0478	Phu Ly RR Br	B	U	<u>8</u>
*18.22	616-0664	Co Trai RR/Hwy Brs	B	V	<u>9</u>
*18.23	616-0479	Bac Giang RR/Hwy Br	B	W	<u>10</u>
*18.24	616-0707	Cao Nung RR Br	B	X	<u>11</u>
*18.25	616-0065	Hai Duong RR/Hwy Br E	B	Y	<u>12</u>
*18.26	616-0784	Lang Con RR Br NW	B	Z	<u>13</u>
*18.27	616-0783	Lang Bun RR Br	B	AA	<u>14</u>
*18.31	616-0460	Kep Hwy Br	B	AE	<u>15</u>
*18.32	616-0225	Tri Dong Hwy Br	B	AF	<u>16</u>
*18.33	616-0075	Thai Nguyen Hwy Br	B	AG	<u>17</u>
*18.35	616-0073	Cho Moi Hwy Br	B	AT	<u>18</u>
*18.36	616-0074	Ha Gia Hwy Br	B	AJ	<u>19</u>
*18.38	616-0714	Dan Phuong Hwy Causeway	B	AL	<u>20</u>
*18.41	616-0726	Ban Pom Lot Hwy Br S	B	AO	<u>21</u>
*18.42	616-0244	Xuan Mai Hwy Br	B	AP	<u>22</u>
*18.44	617-0979	Phuc Thiem Hwy Br	B	AR	<u>23</u>
*18.46	617-0975	Xom Thai Xa Hwy Br	B	AT	<u>24</u>
*18.47	617-0258	Ly Nhan Hwy Br	B	AU	<u>25</u>
*18.49	617-0978	San Dinh Hwy Br	B	AW	<u>26</u>

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TOT #	BE #	NAME	ANNEX	TAB	
*18.5	617-0022	Diem Chau RR Br	B	AX	<u>2</u>
*18.52	617-0174	Xom Gia Hwy Br	B	AZ	<u>3</u>
*18.53	617-0971	Tho Son Hwy Br	B	BA	<u>4</u>
*18.54	617-0178	Ha Tinh Hwy Br	B	BB	<u>5</u>
*18.58	616-0665	Lang Dang RR Br	B	BF	<u>6</u>
*18.59	616-0619	Long Khap Hwy Br	B	BG	<u>7</u>
*18.6	617-0023	Tam Da RR Br	B	BH	<u>8</u>
*18.61	616-0218	Bac Can Hwy Br	B	BI	<u>9</u>
*18.62	616-0823	Lang Luong Hwy Br	B	BJ	<u>10</u>
*18.63	616-0750	Vinh Tuy Hwy Br	B	BK	<u>11</u>
*18.64	616-0227	Ban Pa Huone Hwy Br	B	BL	<u>12</u>
*18.65	616-0076	On Hwy Br	B	BM	<u>13</u>
*18.66	616-0816	Me Xa Hwy Br	B	BN	<u>14</u>
*18.67	615-0286	Chieng Chang Hwy Br	B	BO	<u>15</u>
*18.69	617-0673	La Khe Thon RR Br	B	BOb	<u>16</u>
*18.7	617-0024	Qui Vinh RR Br	B	BP	<u>17</u>
*18.71	616-0412	Loc Binh Hwy Br	B	BPa	<u>18</u>
*18.72	616-0679	Xuan Mai Hwy Br SW	B	BPb	<u>19</u>
*18.74	616-1150	Vu Chua RR Br S	B	BPd	<u>20</u>
*18.75	616-1159	Lang Met Hwy Br	B	BPe	<u>21</u>
*18.76	615-0293	Ha Chanh Hwy Br	B	BPr	<u>22</u>
18.77	615-0350	Ha Chanh Hwy Br N	B	BPg	<u>23</u>
18.78	616-1253	Lam Hwy Br NE	B	BPh	<u>24</u>
*18.8	617-0001	Dong Phong Thuong RR/Hwy Br	B	BQ	<u>25</u>
*18.9	617-0388	Xom Ca Trang Hwy Br	B	BR	<u>26</u>
*19	616-0221	Yen Vien RR Yd	B	BS	<u>27</u>

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TOT #	RE #	NAME	ANNEX	TAB	
*20	616-0022	Hanoi RR Repair Shops	B	BT	<u>1</u>
*21	616-0031	Hanoi RR Yd/Shops	B	BU	<u>2</u>
*21.1	617-0027	Vinh RR Yd	B	BV	<u>3</u>
*21.11	616-0409	Thai Nguyen RR Yd/Shops	B	BVa	<u>4</u>
*22	616-0488	Xuan Mai Bks SSW	C	A	<u>5</u>
*23	616-0277	Xuan Mai Bks NNW	C	B	<u>6</u>
*24	617-0690	Chanh Hoa Bks SE	C	C	<u>7</u>
*25	616-0371	Son La Bks/Supply Dpo/MR Hq	C	D	<u>8</u>
*26	616-0171	Dien Bien Phu Bks	C	E	<u>9</u>
*28	616-0129	Ban Xom Lom Bks	C	G	<u>10</u>
*29	616-0273	Quang Suoi Bks NE	C	H	<u>11</u>
*31	616-0150	Ha Dong Bks/Supply Dpo	C	J	<u>12</u>
*32	617-0780	Vu Con Bks	C	K	<u>13</u>
*33	617-0110	Dong Hoi Bks WNW	C	L	<u>14</u>
*34	616-0282	Vinh Yen Bks/Trng N	C	M	<u>15</u>
*35	616-0205	Son Tay Bks SW	C	N	<u>16</u>
*37	616-0119	Moc Chau Bks	C	P	<u>17</u>
*39	617-0082	Chap Le Bks NW	C	R	<u>18</u>
*39.1	617-0223	Ben Quang Bks SW	C	S	<u>19</u>
*39.11	617-0084	Hoan Lao Bks S	C	T	<u>20</u>
*39.12	617-0203	Dong Hoi Bks	C	U	<u>21</u>
*39.13	617-0620	Phu Le Bks/Supply Dpo	C	V	<u>22</u>
*39.14	617-0099	Ba Don Bks	C	W	<u>23</u>
*39.17	617-0799	Don Bai Dinh Mil	C	Z	<u>24</u>
*39.18	617-1057	Muong Sen Mil	C	Za	<u>25</u>
*39.19	617-1058	Muong Sen Radcom Sta	C	Zb	<u>26</u>

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Appendix A

(Revised by 17th Note to Holders)

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TGT

BE

NAME

ANNEX

TAB

1

*39.2	617-0081	Vinh Linh Bks NE	C	AA	<u>2</u>
*39.22	617-0556	Thanh Hoa Vehicle Repair	C	AAb	<u>3</u>
*39.23	617-0814	Thanh Hoa Bks SSE	C	AAc	<u>4</u>
*39.24	617-0815	Sam Son Bks W	C	AAd	<u>5</u>
*39.25	617-0124	Vinh Son Bks S	C	AAe	<u>6</u>
*39.26	617-0624	Dong Cao Thon Bks	C	AAf	<u>7</u>
*39.27	617-0077	Vinh Bks NNE	C	AAg	<u>8</u>
*39.28	617-0324	Bai Thuong Bks NE	C	AAh	<u>9</u>
*39.29	616-0467	Kep Ha Bks NE	C	AAi	<u>10</u>
*39.3	617-0667	Mu Gia Pass Supply	C	AB	<u>11</u>
*39.31	617-0085	Xom Trung Hoa Bks/Ammo Dpo NNW	C	ABa	<u>12</u>
*39.32	617-0723	Xom Bang Bks E	C	ABb	<u>13</u>
*39.33	616-0953	Trai Thon Bks	C	ABc	<u>14</u>
*39.34	617-0094	Ha Tinh Bks/Supply Dpo	C	ABd	<u>15</u>
*39.35	617-1229	Co Dinh Bks NW	C	ABe	<u>16</u>
*39.36	617-0236	Vinh Bks NW	C	ABf	<u>17</u>
39.37	616-0368	Vinh Yen Bks NNE	C	ABg	<u>18</u>
39.38	616-0372	Phu Tho Bks NW	C	ABh	<u>19</u>
*39.39	617-0123	Phu Van Bks SSE	C	ABi	<u>20</u>
39.41	616-0315	Ngoc Thi Bks/Supply Dpo	C	ABk	<u>21</u>
*39.42	616-0305	Son Dong Bks/School	C	ABl	<u>22</u>
*39.43	616-1376	Kep Vehicle Repair	C	ABm	<u>23</u>
*39.44	616-0458	Chi Ne Bks	C	ABn	<u>24</u>
*39.46	616-0170	Bien Son Bks NNE	C	ABp	<u>25</u>
*39.47	617-1511	Giap Rong Bks	C	ABq	<u>26</u>
*39.49	617-1324	Quang Khe Bks	C	ABs	<u>27</u>

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Appendix A

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IGT #	BE #	NAME	ANNEX	TAB	<u>1</u>
*39.5	617-0237	Xom Trung Hoa Bks/Supply Dpo NW	C	AD	<u>2</u>
*39.51	617-1138	Nam Son Bks	C	ADa	<u>3</u>
*39.6	617-0805	Vinh Linh Bks SW	C	AE	<u>4</u>
*39.7	617-0226	Vinh Linh Bks E	C	AF	<u>5</u>
*39.8	617-0225	Vinh Linh Bks NW	C	AG	<u>6</u>
*40	617-0491	Phu Qui Ammo Dpo SW	C	AI	<u>7</u>
*41	617-0080	Phu Van Ammo Dpo E	C	AJ	<u>8</u>
*42	617-0953	Phu Van POL	C	AK	<u>9</u>
*43	616-0249	Qui Hau Ammo Dpo W	C	AL	<u>10</u>
*44	616-0146	Yen Bai Bks	C	AM	<u>11</u>
*45	616-0061	Haiphong Ammo Dpo SW	C	AN	<u>12</u>
*46	616-0476	Ban Phiang Hay Ammo Dpo	C	AO	<u>13</u>
*47	616-0555	Yen Son Stor	C	AP	<u>14</u>
*47.1	616-0651	Yen Khoai Bks/Ammo Stor	C	AQ	<u>15</u>
*47.11	616-0431	Hoa An Ammo Dpo	C	AR	<u>16</u>
*47.12	616-0323	Lang Het Ammo Dpo	C	AS	<u>17</u>
*47.13	616-0316	Tai Xouan Ammo Dpo SE	C	AT	<u>18</u>
*47.14	616-0353	Vinh Yen Ammo Dpo	C	AU	<u>19</u>
*47.16	615-0279	Hon Gai Explosives Stor	C	AW	<u>20</u>
*47.17	616-0750	Cam Ly Ammo Dpo	C	AX	<u>21</u>
*47.18	617-0626	Xom Rung Ammo Dpo	C	AY	<u>22</u>
*47.19	616-0559	Ban Nuoc Chieu Ammo Dpo	C	AZ	<u>23</u>
*47.2	616-0366	Lang Chi Explosives Plant	C	BA	<u>24</u>
*47.21	616-0725	Bac Giang Ammo Dpo	C	BAa	<u>25</u>
*47.22	616-0905	Bac Can Ammo Dpo	C	BAb	<u>26</u>
*48	616-0005	Haiphong POL	C	BB	<u>27</u>

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Appendix A

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TOT #	REF #	NAME	ANNEX	TAB	
*49	616-0116	Hanoi POL	C	BC	<u>1</u>
*50	617-0192	Vinh POL	C	BD	<u>2</u>
*51	616-0630	Nguyen Khe POL	C	BE	<u>3</u>
*51.1	616-0662	Ha Gia POL SSW	C	BF	<u>4</u>
*51.11	616-0234	Bac Giang POL	C	BFa	<u>5</u>
*51.12	616-0117	Nam Dinh POL	C	BFB	<u>6</u>
*51.13	616-0081	Do Son POL	C	BFC	<u>7</u>
*51.14	616-0319	Viet Tri POL	C	BFD	<u>8</u>
*51.16	617-1018	Phu Qui POL	C	BFF	<u>9</u>
*51.17	616-1176	Duong Nham POL	C	BFG	<u>10</u>
*51.18	616-1340	Can Thon POL	C	BFH	<u>11</u>
*52	617-0044	Vinh Bks/Supply Dpo E/MR Hq	C	BG	<u>12</u>
*53	617-0122	Phu Van Supply Dpc SE	C	BH	<u>13</u>
*54	617-0204	Thien Linh Dong Supply Dpo S	C	BI	<u>14</u>
*55	617-0087	Vinh Son Supply Dpo SW	C	BJ	<u>15</u>
*56	617-0151	Phu Qui Bks/Supply Dpo	C	BK	<u>16</u>
*57	616-0063	Hanoi MND/MZ Hq	C	BL	<u>17</u>
*60	616-0210	Thai Nguyen Supply Dpo N	C	BO	<u>18</u>
*61	616-0137	Xom Chang Bks S	C	BP	<u>19</u>
*62	616-0259	Van Dien Supply Dpo	C	BQ	<u>20</u>
*63	616-0105	Thuan Chau Bks/Supply Dpo	C	BR	<u>21</u>
*63.1	617-1174	Vinh Loc Stor S	C	BRa	<u>22</u>
*63.11	616-0696	Van Dien Vehicle Dpo	C	BRb	<u>23</u>
*63.13	617-1289	Chuc A Bks/Supply	C	BRd	<u>24</u>
*63.14	616-0144	Son Tay Supply Dpo	C	BRe	<u>25</u>
*63.2	617-0091	Dong Thanh Warehouse S	C	BT	<u>26</u>

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Appendix A

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TGT #	REF	NAME	ANNEX	TAB	
*63.21	617-0217	Dong Thanh Warehouse W	C	BTa	<u>1</u>
*64	617-0222	Xom Bang Ammo Dpo	C	BU	<u>2</u>
*65.8	616-1476	Hanoi SAM Support	C	BVg	<u>3</u>
66	616-0164	Hanoi Intl Radcom Xmtr	C	BW	<u>4</u>
*66.1	616-0888	Hanoi Radcom Rcvr	C	BWa	<u>5</u>
67	616-0165	Hanoi Intl Radcom Rcvr	C	BX	<u>6</u>
*67.3	617-0647	Chanh Hao Radcom Sta	C	CS	<u>7</u>
*68	615-0009	Cam Pha Port	C	CZ	<u>8</u>
68.1	615-0291	Cam Pha Approaches (Mining)	C	CZa	<u>9</u>
*69	615-0008	Hon Gai Port	C	DA	<u>10</u>
69.1	615-0292	Hon Gai Approaches (Mining)	C	DAa	<u>11</u>
70	616-0001	Haiphong Port	C	DB	<u>12</u>
70.1	616-0003	Haiphong Approaches (Mining)	C	DC	<u>13</u>
*71	617-0038	Ben Thuy Transshipment	C	DD	<u>14</u>
71.09	617-1016	Phuc Loi Approaches (Mining)	C	DDa	<u>15</u>
*71.1	617-0697	Phuc Loi Naval Base	C	DE	<u>16</u>
*71.13	617-0774	Ham Rong Port E/W	C	DH	<u>17</u>
*72	615-0149	Port Wallut Naval Base	C	DO	<u>18</u>
72.1	615-0293	Port Wallut Approaches (Mining)	C	DOa	<u>19</u>
*73	616-0014	Hanoi Port	C	DP	<u>20</u>
74	617-0932	Quang Khe Approaches (Mining)	C	DQ	<u>21</u>
*74.1	617-0585	Quang Khe Naval Base	C	DR	<u>22</u>
75	616-0198	Viet Tri Chemical Plant	D	A	<u>23</u>
*76	616-0214	Thai Nguyen Steel Plant	D	B	<u>24</u>
77	616-0201	Hanoi Machine Tool Plant	D	C	<u>25</u>
*77.1	616-0706	Haiphong Cement Plant	D	Ca	<u>26</u>

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Appendix A

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TOT #	BE #	NAME	ANNEX	TAB	
78.1	616-0629	Phu Tho Fert Plant	D	Dá	<u>1</u>
79	616-0142	Bac Giang Fert Plant	D	E	<u>2</u>
*80	616-0007	Haiphong TPP W	D	F	<u>3</u>
*81	616-0016	Hanoi TPP	D	G	<u>4</u>
*82	616-0438	Uong Bi TPP	D	H	<u>5</u>
*82.1	617-0533	Thanh Hoa TPP	D	I	<u>6</u>
*82.11	617-0036	Ben Thuy TPP	D	J	<u>7</u>
*82.12	616-0051	Haiphong TPP E	D	K	<u>8</u>
*82.13	615-0014	Hon Gai TPP	D	L	<u>9</u>
82.14	616-0153	Lao Cai TPP	D	M	<u>10</u>
*82.15	616-0232	Nam Dinh TPP	D	N	<u>11</u>
*82.16	616-0322	Thai Nguyen TPP	D	O	<u>12</u>
*82.17	616-0320	Viet Tri TPP	D	P	<u>13</u>
*82.18	617-0370	Co Dinh TPP	D	Q	<u>14</u>
82.19	616-0771	Phu Ly TPP	D	R	<u>15</u>
*82.21	617-0869	Ban Thach HPP	D	T	<u>16</u>
82.22	616-0764	Ta Sa HPP	D	U	<u>17</u>
82.23	616-0765	Ta Sa HPP Na Ngan	D	V	<u>18</u>
*82.24	616-0545	Hanoi Transformer Sta	D	W	<u>19</u>
82.25	616-0703	Lang Chi HPP	D	X	<u>20</u>
*82.26	616-0699	Bac Giang TPP	D	Y	<u>21</u>

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Appendix A

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SECURITY CLASSIFICATION FOR THE SEPARATE PARAGRAPHS OF
EACH "TARGET INFORMATION AND STRIKE DATA" PAGE IS AS FOLLOWS:

1. (U)
2. (U)
3. ~~(S)~~
4. (U)
5. ~~(S)~~
6. ~~(S)~~
7. ~~(S)~~
8. ~~(S)~~
9. ~~(S)~~
10. ~~(S)~~
11. ~~(S)~~
12. ~~(S)~~
13. ~~(S)~~
14. ~~(S)~~
15. (U)

~~SECRET~~

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Appendix A

(Revised by 17th Note to Holders)

~~TOP SECRET~~

~~TOP SECRET~~

ANNEX A TO APPENDIX A

CATEGORY A

AIRFIELDS

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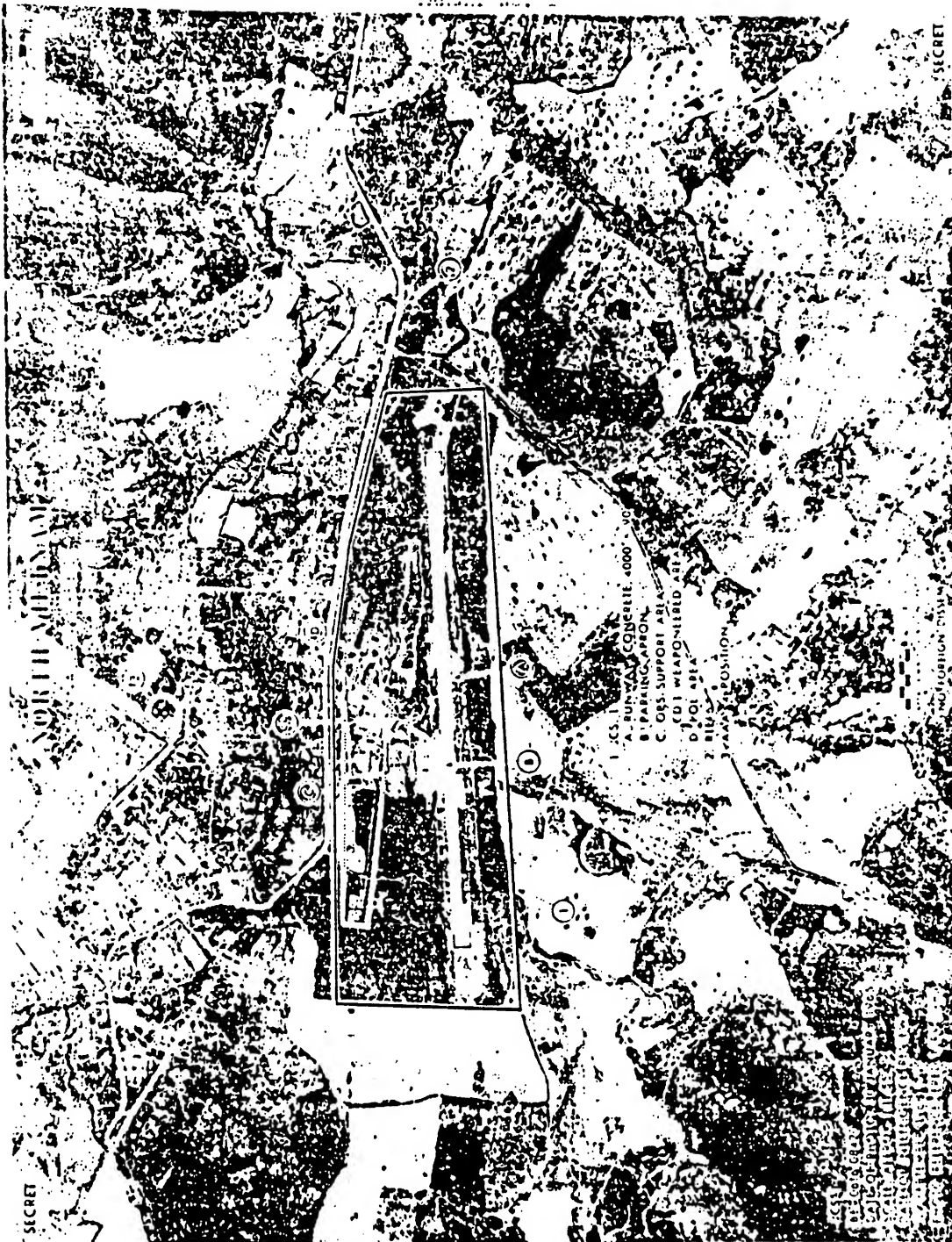
A-A-1

Annex A to
Appendix A

~~TOP SECRET~~

TAB A TO ANNEX A TO APPENDIX A

TARGET NO. 1



A-A-A-

~~SECRET~~

TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER:	1
2. BE NUMBER: 616-0000	2
3. IDENTIFICATION: Na San Airfield	3
4. DATE OF INFORMATION: 13 September 1968	4
DATE OF TISD: 5 December 1968	5
DATE OF PHOTOGRAPHY: 30 January 1965	6
DATE OF INTELLIGENCE REVIEW: 19 September 1968	7
5. LOCATION: 21-12-40N 104-02-17E. located 2 NM E of Na San, 105 NM W of Ha Noi.	8
6. DESCRIPTION: Facility has a 4000' x 90' concrete runway (A) oriented WNW/ESE. Single parking apron (B) approximately 195' x 300' located N side of runway. Storage and support area (C) (located N side of runway and S of Route 6) contains 11 buildings (estimated total 18,855 sq. ft.) and a POL storage area (D) estimated at 37,000 gals.	10
7. SIGNIFICANCE: Facility utilized by transport aircraft (Crates) and serves as connecting facility between Ha Noi and Dien Bien Phu. No evidence is available of supporting activities to PL/VC operations in Laos.	17
8. TARGET ENVIRONMENT: Na San Airfield is adjacent to Route 9. Support buildings cover 63 acres N of runway. N of airfield is a military complex of 375 - 400 acres and S is farmland that is probably part of the State Farm system. All are situated in a broad corridor between high hills. There are no populated areas immediately surrounding the airfield. Several scattered farm villages can be located within a 5-mile radius.	21
9. DEFENSE ENVIRONMENT:	29
a. The target is within the SAM envelope.	30
b. AAA activity has been identified within 3 NM of the target.	31
c. HMG and small arms fire is anticipated.	32
10. DAMAGE OBJECTIVE: Destroy aboveground support facilities and parked aircraft. Damage criteria is structural damage to maintenance facilities. Damage level is 30%.	33
11. EFFECT ON NVN: Reduce direct air logistic support capability to PL/VC and/or 316th Brigade at Dien Bien Phu.	36
12. RECUPERABILITY: Destruction of support and storage facilities and interdiction of runway would probably preclude usage of this installation for 5-7 days. Troops in area could probably effect emergency repairs in that time.	38

~~SECRET~~ NO FOREIGN DISSEM EXCLUDED FROM AUTOMATIC DOWNGRADING

A-A-A-2

TAB A to
Annex A to
Appendix A

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13. COLLATERAL DAMAGE: 1

a. None 2

b. Population Casualties* 3

Target Area Adjacent Area Target Area Adjacent Area 4

M11 Civ M11 Civ M11 Civ M11 Civ 5

125 0 25 0 8 0 0 0 6

*Estimated under daylight alert conditions. 7

14. RECOMMENDED WEAPONS AND SORTIES: 8

(1) In order to achieve a damage level of 30%,
weapons/sorties required over target:

WEAPON	250#	500#	500#	750#	17
	SNAKEYE	SNAKEYE	BOMB	BOMB	18

(2) Weapons/sorties operationally required to achieve "over target" requirements shown above:

74/6 38/1 62/7 36/6 23

(3) In order to achieve a damage level of 70%,
weapons/sorties required over target;

(4) Weapons/sorties operationally required to achieve "over target" requirements shown above: 27
28

15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 30
50% 31

TAB A to
Annex A to
Appendix A

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~~SECRET~~

TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 2 1
2. DE NUMBER: 616-8418 2
3. IDENTIFICATION: Dien Bien Phu Airfield 3
4. DATE OF INFORMATION: 13 September 1968 4
DATE OF TISD: 4 December 1968 5
DATE OF PHOTOGRAPHY: 2 March 1965 6
DATE OF INTELLIGENCE REVIEW: 19 September 1968 7
5. LOCATION: 21-23-40N 103-00-38E, located 0.5 NM 8
NW of Dien Bien Phu, 5 NM E of Laotian border, and 6.4 9
NM N of Ban Cang. 10
6. DESCRIPTION: Airfield has a concrete/asphalt 11
4000' by 80' runway (A) with a 920' sod overrun at the 12
NNW end. Runway is oriented NNW/SSE. There is no secondary 13
runway or taxiway. Storage/support (B) area about 300 14
yds W of the NNW end of runway, contains about 13,100 15
sq. ft. of storage space. Administrative/operations 16
building located between storage/support area and runway. 17
Barracks/support area (C) SW of SSE end of runway. 18
7. SIGNIFICANCE: This airfield was reconstructed in 19 19
late 1958 and has been used by light transport aircraft. 20
Facility is one of two (Na San (JCS #1) being the other) 21
major air installations located in NW North Vietnam. 22
8. TARGET ENVIRONMENT: Airfield is located in the N 23
central portion of the large valley containing Dien Bien 24
Phu. It is an integral part of a large military complex, 25
centered around and S of Dien Bien Phu, which contains 26
elements of the 316th Infantry Brigade. Nearest signif- 27
icant civilian habitation is the town of Dien Bien Phu. 28
9. DEFENSE ENVIRONMENT: 29
 - a. The target is not within the SAM envelope. 30
 - b. AAA activity has been identified within 31
3 NM of the target. 32
 - c. HMG and small arms fire is anticipated. 33
10. DAMAGE OBJECTIVE: Destroy support facilities, 34
stored ammunition and POL storage. Damage criteria 35
damage to support and storage buildings. Damage level 36
is 30%. 37
11. EFFECT ON NVN: Reduces direct light transport 38
support capability to P/V, and would deny light transport 39
to 316th Infantry Brigade at Dien Bien Phu. 40
12. RECUPERABILITY: This airfield could be made 41
operational in 10-15 days through the use of temporary 42
repairs.

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A-A-B-2

TAB A to
Annex A to
Appendix A

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13. COLLATERAL DAMAGE:

a. Light damage to surrounding area

b. Population Casualties:

Target Area Adjacent Area Target Area Adjacent Area

Mil Civ Mil Civ Mil Civ Mil Civ

25 0 75 300 2 0 1 3 6

*Casualties estimated under daylight alert conditions.

14. RECOMMENDED WEAPONS AND SORTIES:

This target complex is comprised of 3 areas. Four sub-areas (within 2 target areas) have been delineated for weapons application. Weapons and sorties have been computed for each sub-area to show the effort required to achieve the desired damage level, total weapons/sorties required over the target are also shown:

(1) In order to achieve a damage level of 30%, weapons/sorties required over target:

WEAPON	250# SNAKEYE	500# SNAKEYE	500# BOMB	750# BOMB
Area B-1 (125' x 45')	9/1	5/1	17/2	10/2
Area B-2 (185' x 45')	9/1	5/1	18/2	11/2
Area B-3 (190' x 135')	14/1	7/1	19/2	11/2
Area C-1 (600' x 120')	22/2	12/1	30/3	18/3
Total	54/5	27/4	84/9	50/9

(2) Weapons/sorties operationally required to achieve "over target" requirements shown above:

65/5 35/4 101/11 60/10

(3) In order to achieve a damage level of 70%, weapons/sorties required over target:

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A-A-B-3

TAB B to
Annex A to
Appendix A

(Revised by 15th Note to Holdern)

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WEAPON	250#	500#	500#	750#
	SNAKEYE	SNAKEYE	BOMB	BOMB

Area B-1	28/2	14/2	56/6	33/6
----------	------	------	------	------

Area B-2	29/2	15/2	59/7	35/6
----------	------	------	------	------

Area B-3	45/4	23/3	62/7	37/6
----------	------	------	------	------

Area C-1	73/6	38/4	101/11	60/10
----------	------	------	--------	-------

Total	175/14	90/11	278/31	165/28
-------	--------	-------	--------	--------

(4) Weapons/porties required to achieve "over target" requirements shown above:

1909/160 2918/244 1501/167 923/154

15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL:
50%

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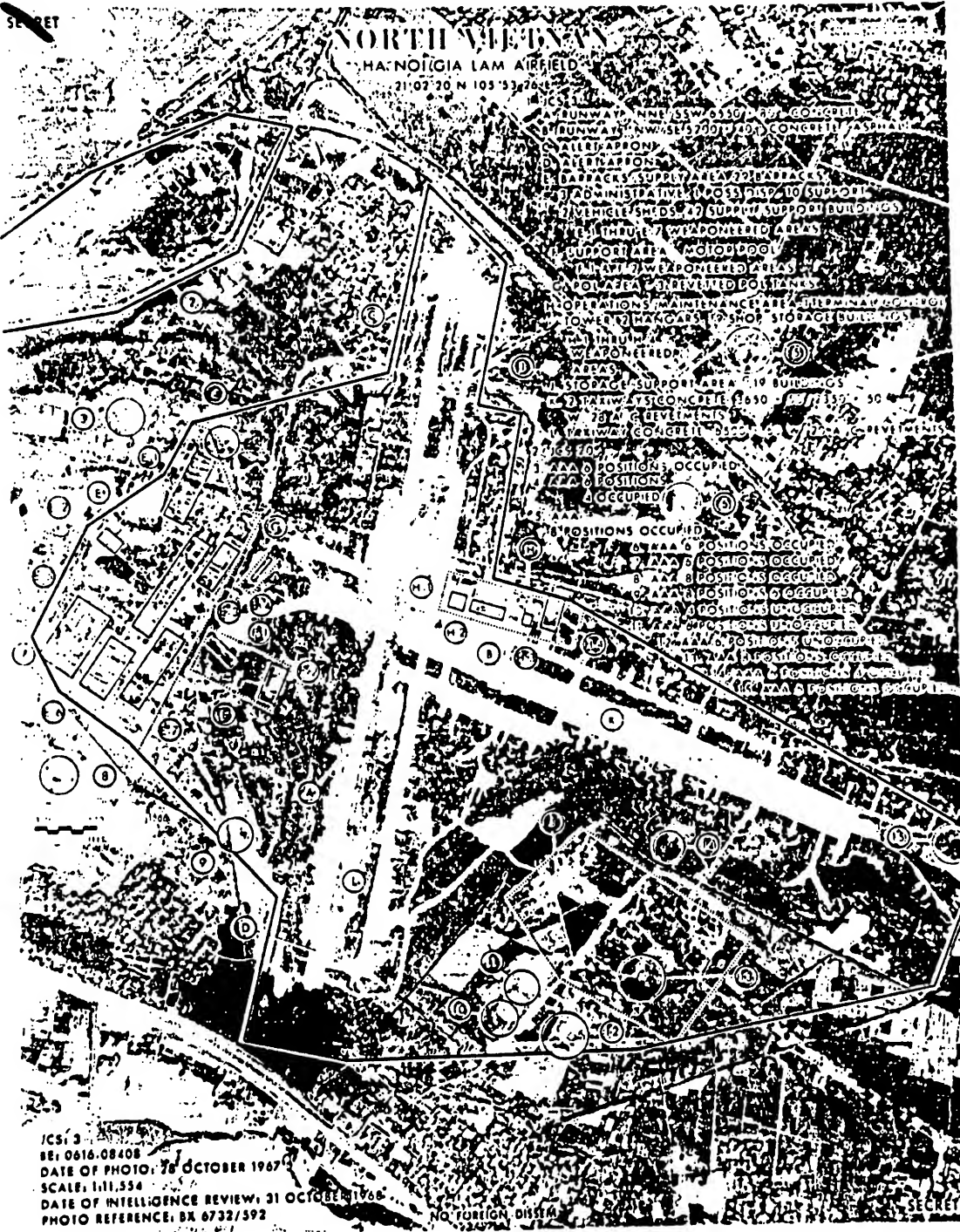
A-A-B-4

TAB B to
Annex A to
Appendix A

(Added by 15th Note to Holders)

TAB C TO ANNEX A TO APPENDIX

THAMBI-1074



JCS: 3
 88: 0616.08408
 DATE OF PHOTO: 28 OCTOBER 1967
 SCALE: 1:11,554
 DATE OF INTELLIGENCE REVIEW: 31 OCTOBER 1968
 PHOTO REFERENCE: BX 6732/592

A-A-C-1

Doc. C. L. 108 A
 1. April 1968

~~SECRET~~

TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 3 1
2. DE NUMBER: 616-8408 2
3. IDENTIFICATION: Ha Noi/Gia Lam Airfield 3
4. DATE OF INFORMATION: 23 May 1968 4
DATE OF TISD: 5 June 1969 5
DATE OF PHOTOGRAPHY: 28 October 1967 6
DATE OF INTELLIGENCE REVIEW: 31 October 1968 7
5. LOCATION: 21-02-20N 105-53-26E, located 1.5 NM ENE of Ha 8
Noi. 9
6. DESCRIPTION: The airfield has a 6550' by 80', NNE-SSW 10
concrete runway (A), and a 5200' by 40' NW/SE concrete runway (B). 11
Alert aprons are located at each end of the NNE-SSW runway (C) 12
and (D). A barracks/supply area is located to the NW of the air- 13
field (E). Area (F) contains a motor pool with 4 buildings and a 14
support area with 6 support buildings. A POL storage area (G) is 15
located at the NW end of the secondary runway and contains 3 revetted 16
POL tanks. An operations and maintenance area (H) is located at the 17
NE junction of the main and secondary runways. A storage support 18
area (J) is located south of the secondary runway. Two concrete 19
taxiways (K) measuring 3650' x 50' and 2350' x 50', respectively 20
provide access to 28 aircraft revetments. The concrete taxiway (L) 21
parallel to the main runway measures 6500' x 60' and provides 22
access to 20 aircraft revetments. 23
7. SIGNIFICANCE: One of the principal transport airfields in 24
NVN, and one of two airfields serving Ha Noi. Airfield has capability 25
for sustained jet fighter operations. 26
8. TARGET ENVIRONMENT: The Ha Noi/Gia Lam Airfield is about 27
5 NM NE of the Ha Noi/Bac Mai Airfield and 3 NM NE of the Ha Noi RR 28
Classification yard. The airfield is across the Red River from Ha 29
Noi on a coastal lowland. Near the airfield are rice fields and 30
dwellings. It is estimated that 5,000 civilians live within one NM 31
radius of the airfield. 32
9. DEFENSE ENVIRONMENT: 33
 - a. The target is within the SAM envelope. 34
 - b. AAA activity has been identified within 3 NM of the target. 35
 - c. HMO and small arms fire is anticipated. 36
10. DAMAGE OBJECTIVE: Destroy above ground support facilities, 37
underground POL storage, and parked aircraft. Damage criteria is 38
structural damage to hangars and maintenance facilities and rupture 39
of POL storage tanks. Damage level is 30%. 40

~~SECRET~~ NO FOREIGN DISSEM EXCLUDED FROM AUTOMATIC DOWNGRADING

A-A-C-2

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Tab C to
Annex A to
Appendix A

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11. EFFECT ON NVN: Damage to this target would deny the use of one of the principal transport bases in NVN, and one of the two in the Ha Noi area. It also would deprive NVN of one of the four jet-capable bases.

12. RECUPERABILITY: Repair of facilities would be enhanced by the availability of construction equipment and personnel, and by the extensive ground transportation system available for the rapid movement of necessary material. Operational status probably could be attained within 10-15 days.

13. COLLATERAL DAMAGE:

a. Light damage to surrounding area.

Population				Casualties*			
Target Area		Adjacent Area		Target Area		Adjacent Area	
Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ
500	0	1500	500	30	0	15	5

*Casualties estimated under daylight alert conditions.

14. RECOMMENDED WEAPONS AND SORTIES:

This target complex is comprised of 11 areas. Four areas including fourteen sub areas have been delineated for weapons application. Weapons and sorties have been computed for each area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target are also shown:

(1) In order to achieve a damage level of 30%, weapons/sorties required over target:

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A-A-C-3

(Revised by 17th Note to Holders)

Tab C to
Annex A to
Appendix A

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WEAPON	250# SNAKEYE or	500# SNAKEYE or	500# BOMB or	750# BOMB
Area E-1 (575'x175')	20/2	11/1	24/3	13/2
Area E-2 (185'x115')	9/1	5/1	14/2	8/1
Area E-3 (900'x165')	27/2	15/2	33/4	18/3
Area E-4 (390'x145')	14/1	8/1	18/2	10/2
Area E-5 (575'x320')	32/3	18/2	28/3	15/3
Area E-6 (455'x245')	22/2	12/1	22/2	12/2
Area E-7 (690'x180')	23/2	13/1	27/3	15/3
Area F-1 (275'x90')	9/1	5/1	15/2	8/1
Area F-2 (310'x150')	12/1	7/1	17/2	9/2
Area G (230'x16')	29/2	20/2	82/9	60/10
Area H-1 (125'x125')	21/2	10/1	28/3	12/2
Area H-2 (275'x85')	12/1	6/1	20/2	10/2
Area H-3 (90'x65')	11/1	5/1	20/2	9/2
Area H-4 (255'x125')	10/1	6/1	15/2	8/1
TOTALS	251/22	141/17	363/41	207/36

(2) Weapons/sorties operationally required to achieve "over target" requirements shown above:

301/26	169/20	436/19	248/43
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(3) In order to achieve a damage level of 70%, weapons/sorties required over target:

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A-A-C-4

(Revised by 17th Note to Holders)

Tab C to
Annex A to
Appendix A

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WEAPON	250#	500#	500#	750#	
	SNAKEYE or	SNAKEYE or	BOMB or	BOMB	
Area E-1	66/6	37/4	79/9	42/7	1
Area E-2	29/2	16/2	47/5	25/4	2
Area E-3	91/8	50/6	111/12	59/10	3
Area E-4	45/4	25/3	61/7	33/6	4
Area E-5	109/9	60/7	93/10	50/8	5
Area E-6	74/6	40/4	73/8	79/7	6
Area E-7	78/7	43/5	91/10	48/8	7
Area F-1	29/2	16/2	51/6	27/5	8
Area F-2	41/3	23/3	56/6	30/5	9
Area G	98/8	67/7	277/31	200/33	10
Area H-1	69/6	32/4	92/10	40/7	11
Area H-2	41/3	21/2	68/8	31/5	12
Area H-3	37/3	18/2	65/7	28/5	13
Area H-4	34/3	19/2	51/6	27/5	14
TOTALS	841/70	467/53	1215/135	679/115	15

(4) Weapons/sorties operationally required to achieve "over target" requirements shown above: 17

1009/84 560/64 1458/16 815/138 18

15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50% 19

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(Added by 17th Note to Holders)

Tab C to
Annex A to
Appendix A

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 4 1
2. BE NUMBER: 617-8400 2
3. IDENTIFICATION: Dong Hoi Airfield 3
4. DATE OF INFORMATION: 13 September 1968 4
DATE OF TISD: 23 February 1971 5
DATE OF PHOTOGRAPHY: 28 January 1965 6
DATE OF INTELLIGENCE REVIEW: 15 December 1968 7
5. LOCATION: 17-30-38N 106-35-46E, located 2.9 NM NNW of Dong Hoi. 8
9
6. DESCRIPTION: The airfield has a 5,700' x 115' asphalt WNW-ESE runway (A) and a 400' x 400' parking area (B). A maintenance and support area (C), located S of the center of the runway include a multistoried administration building with control tower (C-1) a weather station and 3 barracks. A support area (D) is also located S of the runway. Area (E) contains under ground vehicle parking. 10
11
12
13
14
15
16
7. SIGNIFICANCE: Closest major North Vietnamese airfield to the South Vietnam border. Capable of supporting IL-14 (CRATF) aircraft and has limited capacity to support jet fighters (MiG-17 and 19). No evidence of current support of PL/VC operations. 17
18
19
20
21
8. TARGET ENVIRONMENT: Airfield is located on open settled terrain approximately 2.9 NM NNW of Dong Hoi and 1-2 NM SW of the Gulf of Tonkin. Small civilian settlements are located on both sides of the E end of the airfield. 22
23
24
25
9. DEFENSE ENVIRONMENT: 26
 - a. The target is within the SAM envelope. 27
 - b. AAA activity has been identified within 3 NM of the target. 28
29
 - c. HMG and small arms fire is anticipated. 30
10. DAMAGE OBJECTIVE: Destroy support facilities, stored ammunition, and parked aircraft. Damage criteria is structural damage to support buildings, parked aircraft, and damage to ammunition storage structures with destruction of contents. Damage level is 30%. 31
32
33
34
35
11. EFFECT ON NVN: Reduces direct air logistic support capability to the PL/VC and would deny limited support capability for jet, light bomber and fighter operations or recovery. 36
37
38

A-A-D-2

Tab D To Annex
A To Appendix A

(Revised by 17th Note to Holders)

~~SECRET~~ NO FOREIGN DISSEM EXCLUDED FROM AUTOMATIC DOWNGRADING

~~SECRET~~

12. RECUPERABILITY: Destruction of support facilities to include control tower and POL area would probably preclude usage of this installation for a period of 10-15 days. Tentage coupled with mobile air-ground communications could be employed and erected within 3 days to provide emergency stop-gap service. Destruction or air strikes against ground transportation systems servicing this field would extend recuperability time.

13. COLLATERAL DAMAGE:

a. None

b. Population Casualties*

Target Area	Adjacent Area	Target Area	Adjacent Area
M11	Civ	M11	Civ
75	0	0	0
45	0	0	0

*Casualties estimated under daylight alert conditions.

14. RECOMMENDED WEAPONS AND SORTIES:

This target is comprised of 5 areas. Weapons/sorties have been computed for two areas. To show the effort required to achieve the damage level prescribed, total weapons/sorties required "over target" are also shown:

(1) In order to achieve a damage level of 30%, weapons/sorties required over target:

WEAPON	250# SNAKEYE or	500# SNAKEYE or	500# BOMB or	750# BOMB
Area C (915' x 350')	70/6	36/4	53/6	31/5
Area D (285' x 215')	21/2	11/1	22/2	13/2
TOTAL	91/8	47/5	75/8	44/7

(2) Weapons/sorties operationally required to achieve "over target" requirements shown above:

110/9	57/6	90/10	53/10
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(3) In order to achieve a damage level of 70%, weapons/sorties required over target:

WEAPON	250# SNAKEYE or	500# SNAKEYE or	500# BOMB or	750# BOMB
Area C (915' x 350')	235/207	121/13	179/20	105/18
Area D (285' x 215')	71/6	37/4	74/8	44/7
TOTAL	306/262	158/17	253/28	149/25

A-A-D-3

(Revised by 17th Note to Holders)

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1947 RV-2

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(4) Weapons/sorties operationally required to achieve
"over target" requirements shown above:

368/31 190/21 304/34 179/30

15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%

1
2
3
4

A-A-D-4

(Aided by 17th Note to Holders)

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Tab D To Annex
A To Appendix A

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~~SECRET~~

TARGET INFORMATION AND STRIKE DATA SHEET

1. TARGET NUMBER: 5 1
2. B.E. NUMBER: 617-8412 2
3. IDENTIFICATION: Vinh Airfield 3
4. DATE OF INFORMATION: 13 September 1968 4
DATE OF TISD: 4 June 1969 5
DATE OF PHOTOGRAPHY: 7 May 1965 6
DATE OF INTELLIGENCE REVIEW: 15 February 1969 7
5. LOCATION: 18-44-02N 105-40-32E, located 3.5 NM NNW of Vinh. 8
6. DESCRIPTION: The airfield has a 6400' x 190', NNW-SSE laterite runway (A) capable of supporting limited jet fighter operations. A support area (B) contains 18 support buildings including an operations building (B-1). A parking apron 1300' x 210' (C) is located W of the runway and an aircraft dispersal area (D) NW of the runway contains 7 aircraft revetments. Aircraft dispersal areas (E), (F), (G) and (H) contain 20 aircraft revetments. 9-16
7. SIGNIFICANCE: The airfield is capable of supporting transport aircraft in squadron strength on a sustained basis, and has a limited jet fighter capability. 17-19
8. TARGET ENVIRONMENT: Target is located in the coastal plain area 3.5 NM NNW of the city of Vinh, and is adjacent to and E of the N-S railroad and Highway 1A. Headquarters Military Region IV (JCS Tgt #52) is located in the city of Vinh. 20-23
9. DEFENSE ENVIRONMENT: 24
 - a. The target is within the SAM envelope. 25
 - b. AAA activity has been identified within 3 NM of the target. 26
 - c. HMG and small arms fire is anticipated. 27
10. DAMAGE OBJECTIVE: Destroy parked aircraft. Damage level of at least 30% to be inflicted on support facilities. 28-29
11. EFFECT ON NVN: Deny the use of an air logistic support airfield and reduce the number of transport aircraft in an already limited aircraft inventory. 30-32
12. RECUPERABILITY: Storage and support area damage could be supplemented by tentage and temporary repairs. Adjacent road and rail system, if not interdicted, could provide shipment of required construction material. Drum POL could be used to provide necessary refueling. It is estimated that the airfield could become operational in 5-10 days. 33-38

~~SECRET~~ NO FOREIGN DISSEM EXCLUDED FROM AUTOMATIC DOWNGRADING

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(Revised by 17th Note to Holders)

Tab E to
Annex A to
Appendix A

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13. COLLATERAL DAMAGE:

a. Insignificant.

b. Population Casualties*

Target Area Adjacent Area Target Area Adjacent Area

Mil Civ Mil Civ Mil Civ Mil Civ

150 0 75 250 9 0 0 3

*Estimated under daylight alert conditions.

14. RECOMMENDED WEAPONS AND SORTIES:

This target is comprised of 8 areas. One area with 4 sub areas has been delineated for weapons application. Weapons and sorties have been computed for this area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required to achieve "over target" requirements are also shown.

(1) In order to achieve a damage level of 30%, weapons/sorties required over target:

WEAPON	250# SNAKEYE	or	500# SNAKEYE	or	500# BOMB	or	750# BOMB
Area B-1 (140' x 30')	6/1		4/1		13/1		7/1
Area B-2 (125' x 40')	6/1		4/1		13/1		7/1
Area B-3 (300' x 105')	10/1		6/1		12/2		9/2
Area B-4 (250' x 150')	11/1		6/1		16/2		8/1
TOTALS	33/4		20/4		58/6		31/5

(2) Weapons/sorties operationally required to achieve "over target" requirements shown above:

40/5	24/2	70/7	37/6
------	------	------	------

(3) In order to achieve a damage level of 70%, weapons/sorties required over target:

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(Revised by 17th Note to Holders)

Tab F to
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Appendix A

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WEAPON	250#	500#	500#	750#
	SNAKEYE	or SNAKEYE	or BOMB	or BOMB
Area B-1	20/2	11/1	44/5	24/4
Area B-2	20/2	11/1	44/5	23/4
Area B-3	32/3	18/2	53/6	28/5
Area B-4	38/3	21/2	52/6	28/5
TOTAL	110/10	61/6	193/22	103/18

(4) Weapons/sorties operationally required to achieve "over target" requirements shown above:

132/12	73/7	232/26	124/22
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15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%.

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A-A-E-4

(Revised by 17th Note to Holders)

Tab E to
Annex A to
Appendix A

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TAB E TO ANNEX A TO APPENDIX A

TARGET NO. 5

JCS 5
NORTH VIETNAM
AIRCRAFT REVENEMENTS AT VINH AIRFIELD
18 43 52N 105 40 28E



DATE 28 NOV 65 FROM 159 003 004

PREPARED BY THE JOINT CHIEFS OF STAFF, WASHINGTON, D.C.



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Classified by 6th N(II)

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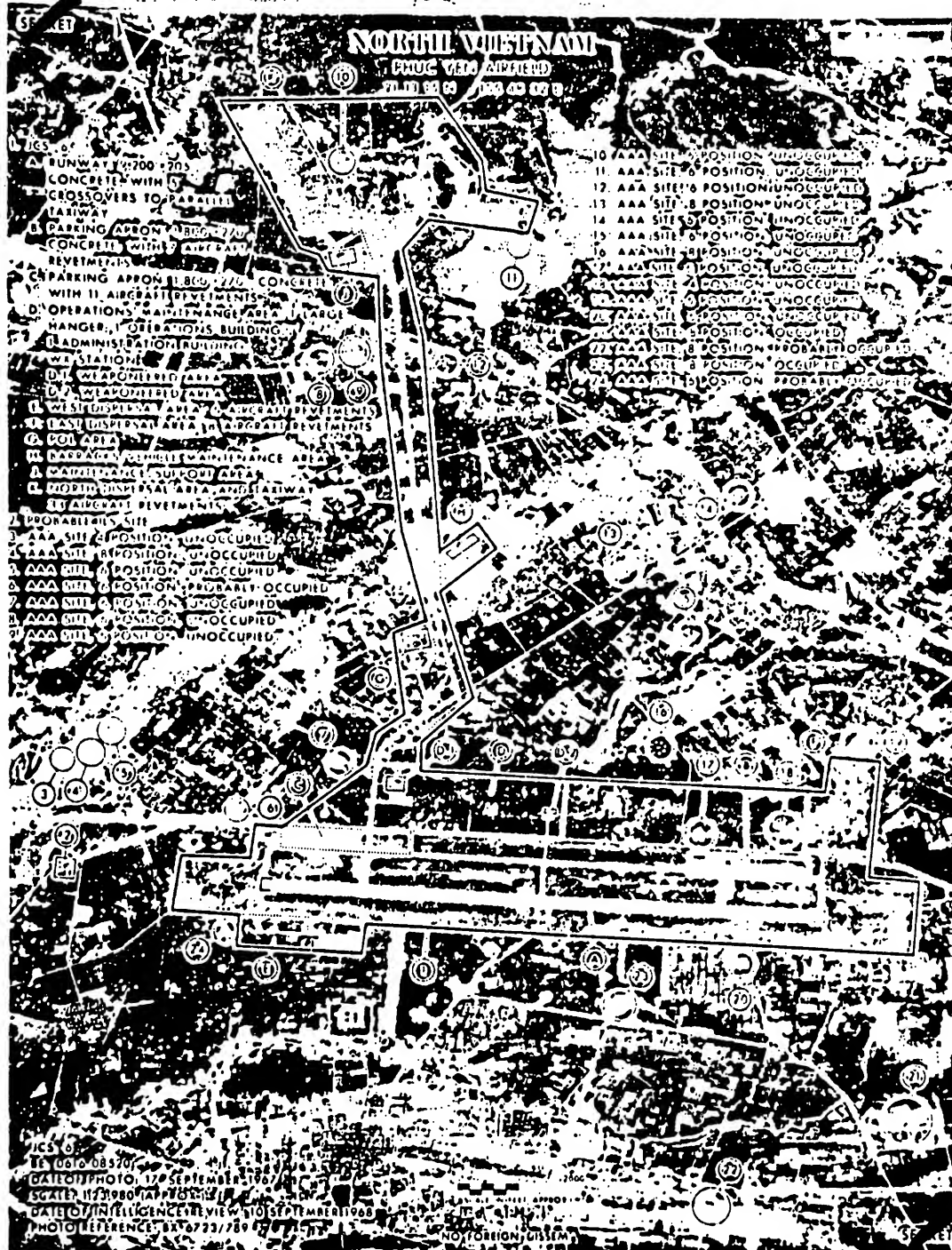
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to Appendix A

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TAB F TO ANNEX A TO APPENDIX A

TARGET NO. 6



~~SECRET~~

(Revised by 17th N/H)

A-A-F-1

Tab F to Annex A
to Appendix A

~~SECRET~~

TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 6
2. BE NUMBER: 616-8520
3. IDENTIFICATION: Phuc Yen Airfield
4. DATE OF INFORMATION: 25 December 1968
DATE OF TISD: 12 March 1969
DATE OF PHOTOGRAPHY: 17 September 1967
DATE OF INTELLIGENCE REVIEW: 25 December 1968
5. LOCATION: 21-13-15N 105-48-32E, located 12 NM N
6. DESCRIPTION: The airfield has a 9200' x 205' WNW/ESE concrete runway (A) and a parallel concrete taxiway on the N side of the runway. Five crossovers connect the taxiway and the runway. Two crossovers (one each approximately 1600' from the E and W ends of the runway) are configured for strip alert. A parking apron (B) on the ESE end of the parallel taxiway is 1800' x 270', concrete, with 7 aircraft revetments. On the WNW end the parking apron (C) is 1800' x 270', concrete, with 11 aircraft revetments. An operational/maintenance area (D) N of the runway contains 1 large hangar, 1 operations building, 1 administration building and a weather station. The W dispersal area (E) has 6 aircraft revetments. The E dispersal area (F) contains 8 aircraft revetments. A fenced POL storage area (G) consists of three large vertical storage tanks (40' in diameter), two support buildings, and a circular drive-thru road. NNE of the runway, paralleling the long taxiway, are a Barracks/Vehicle area (H) and a maintenance/support area (J). The N dispersal area (K) contains 33 aircraft revetments.
7. SIGNIFICANCE: This target is the primary tactical airfield in NVN, and currently has MIG-15/17/21 jet fighters and IL-28 light jet bombers assigned.
8. TARGET ENVIRONMENT: Airfield is located in the comparatively flat, open, heavily cultivated area north of Ha Noi. Numerous civilian populated areas are located within one NM of the airfield.
9. DEFENSE ENVIRONMENT:
 - a. The target is within the SAM envelope.
 - b. AAA activity has been identified within 3 NM of the target.
 - c. HMG and small arms fire is anticipated.

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10. DAMAGE OBJECTIVE: Destroy above ground support facilities, underground POL storage, and parked aircraft. Damage criteria is structural damage to hangars and maintenance facilities and rupture of POL storage tanks. Damage level is 30%.

11. EFFECT ON NVN: Would deprive NVN of its primary tactical airfield, and would seriously reduce the air defense capability of NVN.

12. RECUERABILITY: Repair of support facilities would be facilitated by the presence of construction equipment and personnel in the Ha Noi area, the rapid movement of which would be possible over the existing good ground transportation system. This airfield probably could be returned to operational status in 10-15 days.

13. COLLATERAL DAMAGE:

a. None

b.		Population		Casualties*			
Target Area	Adjacent Area	Target Area	Adjacent Area	Target Area	Adjacent Area	Target Area	Adjacent Area
Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ
450	0	50	0	27	0	1	0

*Casualties estimated under daylight alert conditions.

14. RECOMMENDED WEAPONS AND SORTIES:

This is a large target complex comprised of 10 areas. Four areas (with two sub-areas) have been delineated for weapons application: Weapons and sorties have been computed for each area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target are also shown:

(1) In order to achieve a damage level of 30%, weapons/sorties required over target:

WEAPON	250# SNAKEYE	500# SNAKEYE	500# BOMB	750# BOMB
Area D-1 (295'x230')	30/3	12/1	23/3	11/2
Area D-2 (200'x80')	17/1	10/1	34/4	23/4
Area G (420'x310')	29/2	24/3	38/4	34/6
Area H (560'x145')	24/2	12/1	30/3	17/3
Area J (430'x210')	29/2	15/2	27/3	16/3
Total	129/10	73/8	152/17	101/18

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(Revised by 17th Note to Holders)

Tab F To
Annex A To Appendix A

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(2) Weapons/sorties operationally required to achieve "over target" requirements shown above:

1557/13 88/10 183/20 122/20

(3) In order to achieve a damage level of 70%, weapons/sorties required over target:

WEAPON 250# SNAKEYE 500# SNAKEYE 500# BOMB 750# BOMB

Area D-1 100/8 40/4 78/9 37/6

Area D-2 56/5 33/4 113/13 78/13

Area G 97/3 80/9 129/14 114/19

Area H 77/7 41/5 98/11 58/10

Area J 96/8 50/6 91/10 54/9

Total 428/36 244/28 509/57 341/57

(4) Weapons/sorties operationally required to achieve "over target" requirements shown above:

514/43 293/33 611/66 410/68

15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%

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Tab F To Annex
A To Appendix A

(Revised by 17th Note to Holders)

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TAB. G. TO ANNEX A TO APPENDIX A
GENERAL TARGET NO. 7



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(H/R 1000 1000 1000 1000)

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Annex A
Annex A

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 7
2. BE NUMBER: 616-8407
3. IDENTIFICATION: Ha Noi/Bac Mai Airfield
4. DATE OF INFORMATION: 2 October 1968
DATE OF TISD: 13 March 1969
DATE OF PHOTOGRAPHY: 4 October 1967
DATE OF INTELLIGENCE REVIEW: 27 December 1968
5. LOCATION: 20-59-29N 105-50-12E, located 1.2 NM SSW of Ha Noi, 1000' W of railroad to Ha Noi and 2.8 NM ENE of Ha Dong.
6. DESCRIPTION: Airfield has a single asphalt/concrete runway (A), 4100' by 120', oriented NNW/SSE. Two 660' by 170' concrete parking aprons (B) are located E of the NE end of the runway and adjacent to and S of the hangar/maintenance area (E). N of the runway is a housing/support area (C) containing 105 buildings. A headquarters area (D) consists of one headquarters building, 1 U/G command/communications bunker and 4 administration/support buildings. The primary maintenance/support area (F) lies NE of the runway and contains 4 hangars and 20 maintenance/support buildings. A revetted POL and support area (F) is located in the angle formed by the taxiway and the NE parking apron. A barracks area (G) contains 11 barracks, 3 messhalls and 6 support buildings, and is adjacent to a radio communications station (H). Located SW of the runway is a radar/support area (J) containing 6 radar revetments, 1 radar mound, and 9 support buildings. Area (K) a barracks/support area includes 10 barracks, 1 messhall, 1 auditorium, 2 vehicle sheds and 15 support buildings. An explosives storage area (L) consists of 4 buildings and a security fence. Area (M) is a small arms training area. Barracks/support area (N) comprises 10 barracks, 1 messhall, 1 probable communications/control building and 23 support buildings. Communications Facility (P), includes abandoned explosive storage area and 3 revetted buildings and a vehicle maintenance/support area (Q). North northwest of the N end of the runway are 7 vehicle sheds, one barracks building and 7 support buildings. An explosives storage area (R) W of the N end of the runway is surrounded by a security fence and consists of 5 buildings.
7. SIGNIFICANCE: This target is one of two airfields serving Ha Noi and one of the major airfields in NVN. This airfield is not capable of supporting jet operations, but is suitable for use in the rapid movement of troops stationed in the Ha Noi area.
8. TARGET ENVIRONMENT: Airfield is located in a flat, open, heavily cultivated area S of Ha Noi. Numerous civilian populated areas are located around the airfield within a one NM radius. There are numerous storage, barracks, and supply areas near the airfield.

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(Revised by 17th Note to Holders)

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DEFENSE ENVIRONMENT:

- a. The target is within the SAM envelope.
- b. AAA activity has been identified within 3 NM of the target.
- c. HMO and small arms fire is anticipated.

10. **DAMAGE OBJECTIVE:** Destruction of hangars, maintenance and support facilities. Damage level is 30%.

11. **EFFECT ON NVN:** Reduction in the ability to provide logistical support to military and civil air units, and in the capability to provide air movement to ground forces in the Ha Noi area.

12. **RECUPERABILITY:** Availability of construction personnel and equipment on site would be a major factor in recuperability of installation not only in runway repair but affording temporary rehabilitation of support facilities. Close proximity of civilian resources to include manpower would contribute to early recuperability. Transportation system servicing facility would facilitate movement of required resources. Operational recuperability could probably be accomplished within 10 days.

13. **COLLATERAL DAMAGE:**

a. None

b.		Population		Casualties*			
Target Area		Adjacent Area		Target Area		Adjacent Area	
Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ
50	0	300	0	15	0	3	0

*Casualties estimated under daylight alert conditions.

RECOMMENDED WEAPONS AND SORTIES

This target is comprised of 16 areas. Eleven areas have been delineated for weapons application. Weapons and sorties have been computed for each area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target area also shown:

(1) In order to achieve a damage level of 30%, weapons/sorties required over target:

A-A-G-3

Tab G To Annex
A To Appendix A

(Revised by 17th Note to Holders)

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WEAPON	250# SNAKEYE or	500# SNAKEYE or	500# BOMB or	750# BOMB
Area A (135' x 340')	120/1	54/6	77/9	45/8
Area B-L (1020' x 579')	172/14	75/9	97/11	49/8
Area O (660' x 150')	27/2	14/2	5/4	20/3
Area H (43' x 57')	3/1	4/1	16/2	10/2
Area J (335' x 245')	26/2	13/1	24/3	15/3
Area K (330' x 13')	37/3	19/2	41/5	24/4
Area L (345' x 120')	33/3	38/4	105/12	105/18
Area H (1320' x 250')	72/6	37/4	64/7	33/6
Area P (220' x 45')	2/1	5/1	18/2	11/2
Area Q (600' x 340')	42/4	25/3	38/4	23/4
Area R (295' x 110')	31/3	31/3	68/8	68/11
Total	575/48	315/34	581/67	408/69

(2) Weapons/sorties operationally required to achieve "over target" requirements shown above:

690/58 378/42 698/76 490/82

(3) In order to achieve a damage level of 70%, weapons/sorties required over target:

WEAPON	250# SNAKEYE or	500# SNAKEYE or	500# BOMB or	750# BOMB
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A-A-G-4

Tab G To Annex
A To Appendix A

(Revised by 17th Note to Holders)

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Area C-D	356/30	183/20	259/29	152/25	1
Area D-E	581/48	252/88	326/36	163/27	2
Area G	91/8	47/5	111/12	65/11	3
Area H	26/2	13/1	54/6	32/5	4
Area J	85/7	44/5	81/9	48/8	5
Area K	125/10	64/7	136/15	80/13	6
Area L	127/11	127/14	353/39	353/59	7
Area N	243/20	125/14	216/24	127/21	8
Area P	30/3	15/2	60/7	35/6	9
Area Q	163/14	84/9	127/14	75/13	10
Area R	105/9	105/12	229/25	229/38	11
Total	1932/162	1059/117	1952/216	1359/226	12
(4) Weapons/sorties operationally required to achieve "over target" requirements shown above:					13
	2319/193	1271/141	2343/260	1631/272	14
15. <u>PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%.</u>					15
					16

A-A-G-5

(Added by 17th Note to Holders)

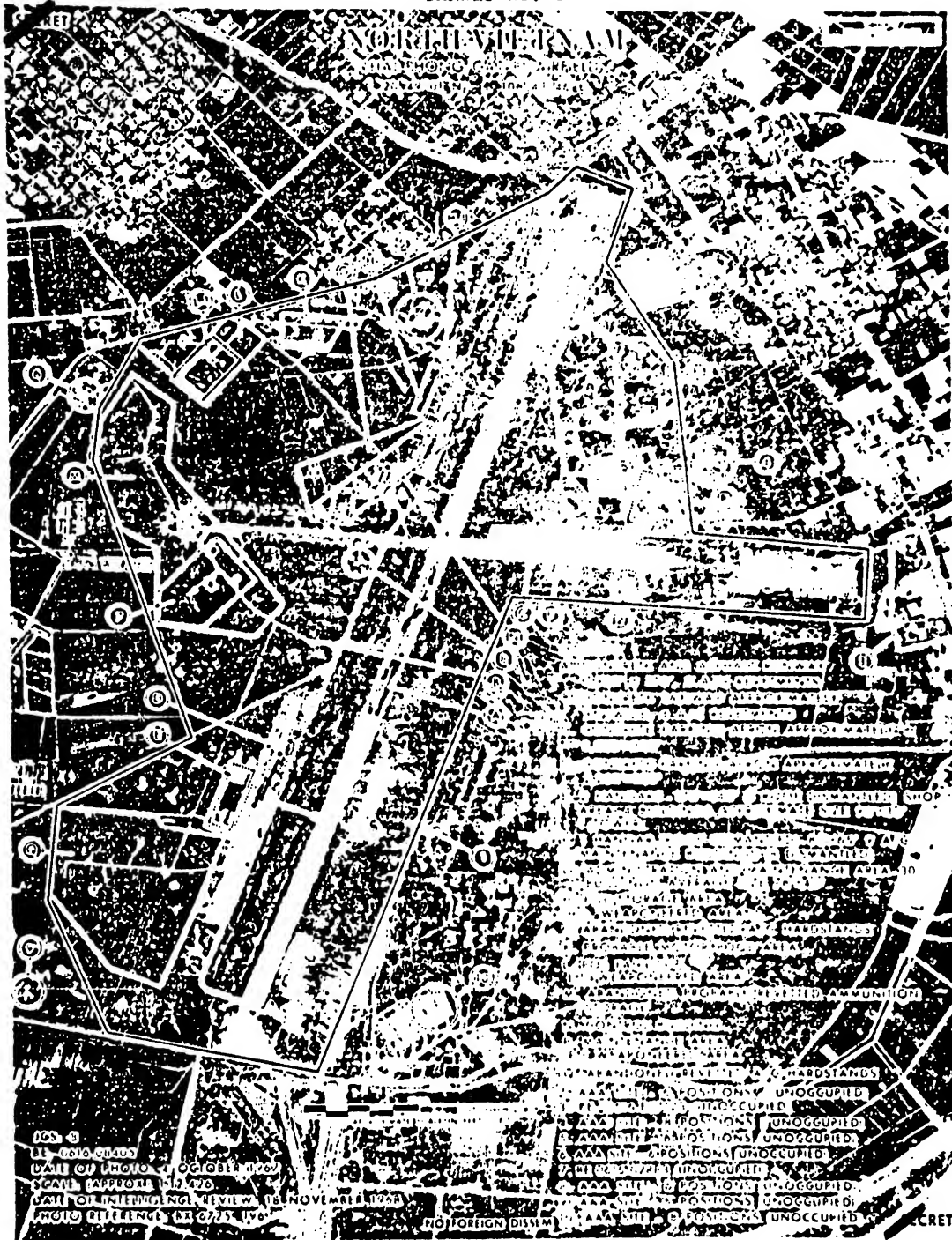
Tab G To Annex
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TAB H TO ANNEX A TO APPENDIX A

TARGET NO. 8



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A-A-11-1

THE HUMAN ANATOMY AND PHYSIOLOGY

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TARGET INFORMATION AND STRIKE DATA

1. **TARGET NUMBER:** 8 1
2. **BE NUMBER:** 616-8405 2
3. **IDENTIFICATION:** Hai Phong/Cat Bi Airfield 3
4. **DATE OF INFORMATION:** 15 October 1968 4
DATE OF TISD: 5 August 1966 5
DATE OF PHOTOGRAPHY: 4 October 1967 6
DATE OF INTELLIGENCE REVIEW: 18 November 1968 7
5. **LOCATION:** 20-49-01N 106-43-46E, located 3.5 NM SE of center of Hai Phong, 0.5 NM WNW of Cat Bi, and 1.6 NM W of Gulf of Tonkin. 8 9
6. **DESCRIPTION:** This airfield has a 7,900' by 170' concrete/asphalt runway (A) oriented NE/SW; a former 1,700' by 150' NW/SE concrete runway which has been converted into a 1,300' by 300' parking apron (C); and a 2,200' by 300' parking apron (D) N of, and connected by a taxiway (B) and 4 access links to the main runway. There are 3 hangars, 2 of which (175' by 140') are adjacent to the N parking apron (E), and the third (F) (80' by 65'), the roof of which probably is dismantled, is located adjacent to the parking apron formed from the old runway. An administrative/maintenance area (G) containing 30 buildings (average size 40' by 78') is located just N of the mid-area of the runway, and just to the E of this area is a POL storage area (H) of unknown capacity. A second POL storage area (L), also of unknown capacity, is located N of the administrative/maintenance area, and to the SE is a probable motor pool area (K). Additional facilities include a shop area (E) with 3 90' by 30' buildings adjacent to the N parking area; an aircraft maintenance area (P) E of the S parking area; and a control tower (N) located between the administrative/maintenance area and the runway. The aircraft revetments (J and Q) previously noted N of the W end of the runway, and probable revetted ammunition storage (M) N of the center of the runway, apparently have been abandoned. 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29
7. **SIGNIFICANCE:** Hai Phong/Cat Bi Airfield is one of the two jet fighter bases serving Hai Phong. The airfield has the capability of supporting jet fighters on a limited basis. 30 31 32
8. **TARGET ENVIRONMENT:** Airfield is located in the flat, open, Tonkin delta area, along the Lach Tray River. Civilian populated areas are adjacent to the N and E edges of the airfield. Hai Phong/Cat Bi Airfield is an element of an extensive military complex in the Hai Phong area. 33 34 35 36 37

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(Revised by 16th Note to Holders)

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9. DEFENSE ENVIRONMENT:

- a. The target is within the SAM envelope.
- b. AAA activity has been identified within 3NM of the target.
- c. IIMG and small arms fire is anticipated.

10. DAMAGE OBJECTIVE: Destruction of aboveground support facilities and parked aircraft. Damage criterion is structural damage to hangars and maintenance facilities. Damage level is 30%.

11. EFFECT ON NVN: Reduced air transport logistic support to PL/VC and capability to support jet medium bombers and fighters.

12. RECUPERABILITY: Recuperability from a 30% damage level to facilities could probably be obtained in 10 days. Temporary storage and support facilities could probably be repaired to limited usability within same frame. Damage to POL storage and servicing facilities would limit aircraft operations. Military manpower is available from the infantry units within the area for recuperability efforts. Repair equipment from military and civilian sources within immediate vicinity could augment pick and shovel forces.

13. COLLATERAL DAMAGE:

a. Insignificant.

b. Population

Casualties*

Target Area				Adjacent Area			
Target Area	Adjacent Area	Target Area	Adjacent Area	Target Area	Adjacent Area	Target Area	Adjacent Area
Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ
2500	0	250	1500	150	0	3	15

*Casualties estimated under daylight alert conditions.

14. RECOMMENDED WEAPONS AND SORTIES:

This target is comprised of 15 areas. Six areas have been delineated for weapons application. Weapons and sorties have been computed for each area. To show the effort required to achieve the prescribed damage level, total weapons/sorties required over the target are also shown:

(1) In order to achieve a damage level of 30%, weapons/sorties required over target:

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Weapon:	250# SNAKEYE or	500# SNAKEYE or	500# BOMB or	750# BOMB	
Area E (565' x 195')	7/1	5/1	9/1	6/1	1 2 3 4
Area F (435' x 280')	33/3	17/2	29/3	17/3	5 6
Area G (1320' x 270')	77/6	40/4	66/7	39/7	7 8
Area H-1 (360' x 130')	20/2	16/2	42/5	36/6	9 10
Area L-1 (490' x 330')	50/4	39/4	61/7	53/9	11 12
Area P-1 (480' x 155')	22/2	12/1	27/3	16/3	13 14
Total:	209/18	129/14	234/26	167/29	15

(2) Weapons/sorties operationally required to achieve "over target" requirements shown above:

251/21 155/17 281/31 201/34

(3) In order to achieve a damage level of 70%, weapons/sorties required over target:

Weapon:	250# SNAKEYE or	500# SNAKEYE or	500# BOMB or	750# BOMB	
Area E	23/2	14/2	29/3	19/3	21 22 23
Area F	110/9	57/6	96/11	57/10	24
Area G	259/22	133/15	221/25	130/22	25
Area H-1	67/6	53/6	140/16	121/20	26
Area L-1	166/14	131/15	204/23	176/29	27
Area P-1	74/6	38/4	90/10	53/9	28
Total:	699/59	426/48	780/88	556/93	29

(4) Weapons/sorties operationally required to achieve "over target" requirements shown above:

839/70 512/57 936/104 668/111

15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%.

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TARGET 100, 10



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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 9 1
2. BE NUMBER: 616-8/133 2
3. IDENTIFICATION: Hai Phong/Kien An Airfield 3
4. DATE OF INFORMATION: 13 September 1968 4
DATE OF TIED: 5 December 1968 5
DATE OF PHOTOGRAPHY: 11 June 1967 6
DATE OF INTELLIGENCE REVIEW: 26 September 1968 7
5. LOCATION: 20-48-10N 106-36-43E, located 3.9 NM 8
SW of Hai Phong, 1.8 NM W of Kien An and just S of Iach 9
Tray (river). 10
6. DESCRIPTION: Airfield has a single 5900' x 140' 11
NE/SW concrete runway (A) with a parallel 5900' x 50' 12
concrete taxiway (B) on the SE side of the runway. There 13
are six crossovers from the runway to the taxiway, and 14
two concrete parking ramps (C) are located adjacent to the 15
SW portion of the taxiway. A 50' concrete link taxiway 16
with 18 aircraft revetments along the S side (D), ex- 17
tends E from the SW end of the parking apron, connecting 18
to the S end of a N/S taxiway serving an aircraft 19
parking area which has 12 aircraft revetments (E). 20
A possible ammunition storage area (F) is located just 21
N of the E end of the link taxiway, and a support area 22
(G), containing approximately 24 support buildings, is 23
located W of the SW end of the runway. Underground POL 24
storage (H) is believed to be located just E of the SW 25
end of the runway. 26
7. SIGNIFICANCE: This airfield is utilized primarily 27
by light transport aircraft, and is one of two such air- 28
fields in the Hai Phong area. The length and construction 29
of the runway would indicate suitability for jet fighter 30
operations, but the absence of maintenance and support 31
facilities, and a history of an unstable runway base 32
(the runway apparently is built on fill, requiring 33
frequent runway repairs), make it unsuitable for sustained 34
jet fighter activity. 35
8. TARGET ENVIRONMENT: Airfield is located in the 36
flat, open, Tonkin delta area, along the Iach Tray 37
(river). Civilian populated areas occur on the NW 38
side and at both ends of the runway. Hai Phong/Kien An 39
Airfield is one part of an extensive military complex 40
in the Hai Phong area. Within this area are reported the 41
headquarters and some operational elements of the 350th 42
Inf Bde, and possibly two Infantry Regts. 43

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9. DEFENSE ENVIRONMENT

a. The target is within the SAM envelope.

b. AAA activity has been identified within 3 NM of the target.

c. IIMG and small arms fire is anticipated.

10. DAMAGE OBJECTIVE: Destroy aboveground support facilities and parked aircraft. Damage criteria is structural damage to maintenance facilities. Damage level is 30%.

11. EFFECT ON NVN: Reduction of air transport and logistic support capabilities and denial of limited support capability for jet fighter operations.

12. RECUPERABILITY: Repair of support facilities by presence of construction equipment and personnel in the area. Ground transportation in area is sufficient for required movement of material. Operational recuperability could probably be effected within 10 days.

13. COLLATERAL DAMAGE:

a. Insignificant

b. Population Casualties*

Target Area Adjacent Area Target Area Adjacent Area

M11 Civ M11 Civ M11 Civ M11 Civ

175 0 5 150 11 0 0 2 23

*Casualties estimated under daylight alert conditions.

14. RECOMMENDED WEAPONS AND SORTIES:

This target is comprised of 10 areas. Three areas (with 2 sub-areas) have been delineated for weapons application. Weapons and sorties have been computed for each area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target are also shown:

(1) In order to achieve a damage level of 30%, weapons/sorties required over target:

WEAPON	250# SNAKYE	500# SNAKYE	500# BOMB	750# BOMB
Area F-1 (1350'x130')	118/10	61/7	82/9	48/8
Area F-2 (615'x211')	33/3	17/2	33/4	20/3
Area G (455'x115')	23/2	10/1	26/3	13/2
Area H (332'x225')	22/2	22/2	43/5	43/7
Total	196/17	110/12	184/21	124/20

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(2) Weapons/sorties operationally required to achieve "over target" requirements shown above:

236/20 132/15 221/25 149/25

(3) In order to achieve a damage level of 70%, weapon/sorties required over target:

Area F-1 298/33 204/23 277/31 162/27

Area F-2 111/9 57/6 111/12 65/11

Area G 77/6 31/3 87/10 41/7

Area H 74/6 74/8 144/16 144/24

Totals 660/54 336/40 619/69 412/69

(4) Weapons/sorties operationally required to achieve "over target" requirements shown above:

15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL:
50%

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 9.1
2. BE NUMBER: 616-8438
3. IDENTIFICATION: Kep Airfield
4. DATE OF INFORMATION: 13 September 1968
DATE OF TISD: 3 June 1969
DATE OF PHOTOGRAPHY: 18 January 1967
DATE OF INTELLIGENCE REVIEW: 4 September 1968
5. LOCATION: 21-23-37N 106-16-05E, located 0.6 NM W of Kep, 32.7 NM NE of Ha Noi and immediately W of the Ha Noi - Lang Son Railroad.
6. DESCRIPTION: An extensive runway improvement program completed in September 1965 resulted in a 5975' by 155' ENE/WSW concrete runway (A). Improvements in the summer of 1968 extended (A-1) the runway to 7150' by 155' which is presently being utilized by MIG aircraft. An aircraft dispersal area (B) contains 14 revetted hardstands while storage area (C), N of the E end of the runway, contains 24 revetments. South of the eastern end of the runway is an alert apron (D) containing 4 revetted hardstands. A parking apron (E), S of the runway, is under construction. An administration/operations area (F) contains 1 operations building, 4 barracks, 2 mess halls, 2 storage buildings, several small support buildings and a weather station. Parking area (G) is under construction. A storage area (H) S of the western end of the runway consists of 3 vehicle revetments and 4 small storage revetments. Storage area (J) contains 13 revetments. An aircraft dispersal area (K) contains 8 revetted hardstands. Storage area (L) S of the eastern end of the runway has 6 vehicle/storage revetments.
7. SIGNIFICANCE: This airfield presently is utilized by MIG jet fighters. This airfield represents the first known deployment of fighter aircraft to other than Phuc Yen. The facility is one of the major airfields in North Vietnam.
8. TARGET ENVIRONMENT: This airfield is located on open and intensively cultivated terrain. Small civilian settlements are scattered throughout the area and a canal abuts the SW end of the field.
9. DEFENSE ENVIRONMENT:
 - a. The target is within the SAM envelope.
 - b. AAA activity has been identified within 3 NM of the target.
 - c. HMG and small arms is anticipated.

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10. DAMAGE OBJECTIVE: Damage criteria is structural damage to support buildings, barracks, and storage buildings with accompanying personnel casualties. Damage level is 30 per cent.

11. EFFECT ON NVN: Damage to this facility would reduce the NVN air defense capability and would disrupt activity relative to improving and possibly increasing the capability of this airfield.

12. RECUPERABILITY: Destruction of support and storage facilities and interdiction of runway would probably preclude use of this installation from 5 to 7 days. Troops in the area could probably effect emergency repairs in that length of time.

13. COLLATERAL DAMAGE:

a. None

b. Population Casualties*

Target Area	Adjacent Area	Target Area	Adjacent Area
M11 Civ	M11 Civ	M11 Civ	M11 Civ
500 0	50 0	30 0	1 0

*Casualties estimated under daylight alert conditions.

14. RECOMMENDED WEAPONS AND SORTIES:

This target is comprised of 11 areas. One area (with one sub-area) has been delineated for weapons application. Weapons and sorties have been computed for this area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target are also shown:

(1) In order to achieve the damage level of 30%, weapons/sorties required over target:

WEAPON	250# SNAKEYE	or	500# SNAKEYE	or	500# BOMB	or	750# BOMB
Area F-1 (220' x 400')	26/2		13/1		26/3		15/3

(2) Weapons/sorties operationally required to achieve "over target" requirements shown above:

32/3	16/2	32/4	18/3
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(3) In order to achieve the damage level of 70%, weapons/sorties required over target:

86/7	44/5	86/10	51/9
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(4) Weapons/sorties operationally required to achieve "over target" requirements shown above:

104/9	53/6	104/12	62/10
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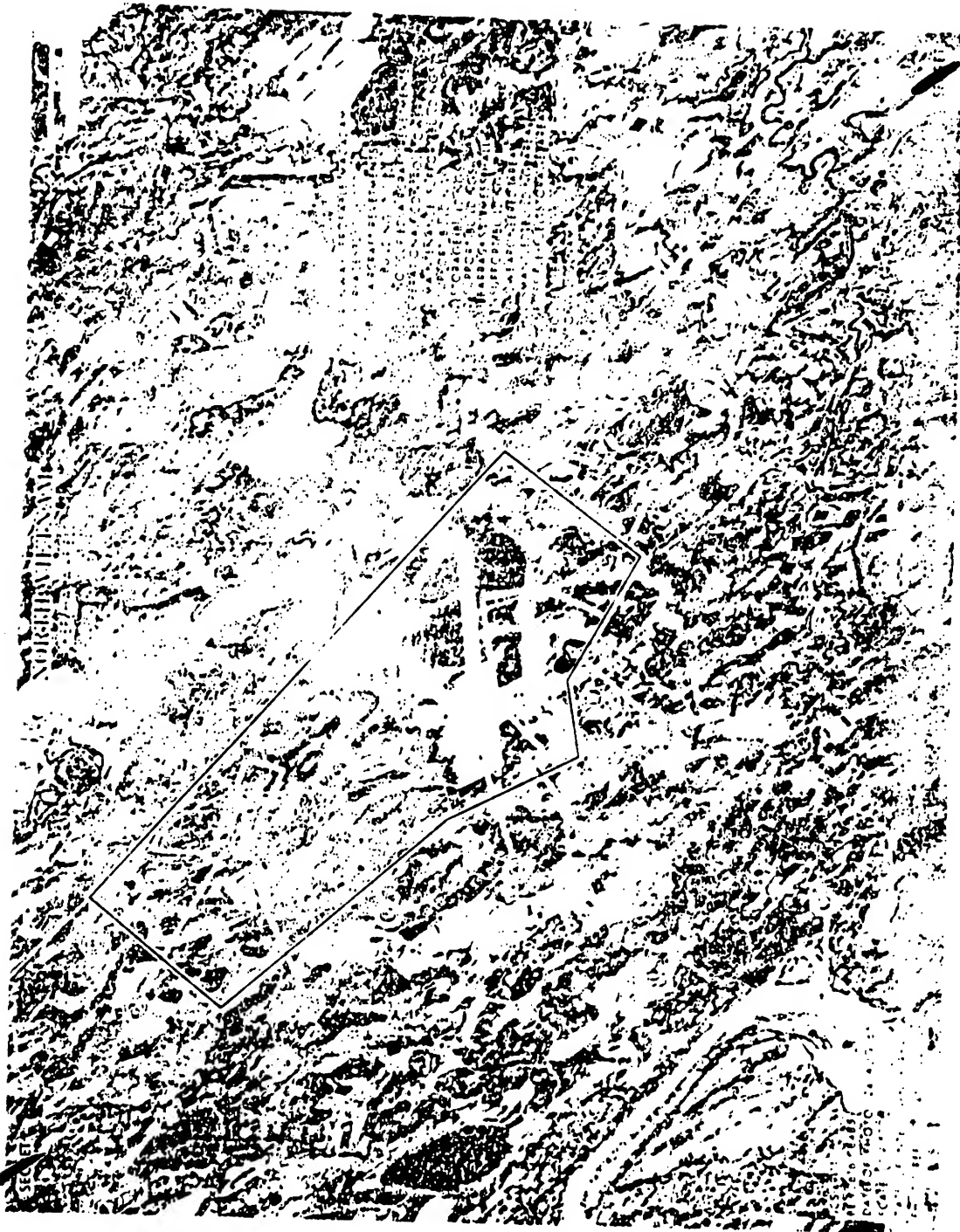
15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%.

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(Revised by 17th Note to Holders)

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 9.11 1
2. BE NUMBER: 616-8485 2
3. IDENTIFICATION: Kep Ha Airfield 3
4. DATE OF INFORMATION: 12 August 1966 4
DATE OF TISC: 6 August 1969 5
DATE OF PHOTOGRAPHY: 24 August 1965 6
DATE OF INTELLIGENCE REVIEW: 31 July 1969 7
5. LOCATION: 21-22-52N 106-39-47E, 2.5 NM E of Kep Ha, and 8
22.5 NM E of Kep Airfield, on S side of Route 13B. 9
6. DESCRIPTION: Airfield runway (A) is approximately 3250' x 100' oriented 10
NE/SW. Runway surface is probably macadam. Facility improvements since 11
July 1965 include 12 U-shaped revetments completed on S side of runway (B), and 12
3 completed on N side (D). Four revetments on S side and four revetments on N 13
side of runway are under construction. Revetment taxiways are also under con- 14
struction. Extensive grading and construction scars are located on both sides of 15
SW end of runway. Support facilities located on the NNW side of the runway consist 16
of a control tower, radio facility, two maintenance/support buildings and 2 other 17
support buildings (E). To the W of the runway are 2 storage and 2 support buildings 18
(F), 3 barracks, a mess hall, and a support building (G), a possible fuel storage 19
area (J), and an area with dismantled buildings (H). Southeast of the SW end of the 20
runway is an unidentified building (C). This airfield is used by single-engine trans- 21
ports. 22
7. SIGNIFICANCE: Present construction activities seem to be inconsistent with 23
the runway length. At least 10 of the new aircraft revetments are configured for jet 24
aircraft yet the runway is not capable of supporting jet aircraft. Probably the cur- 25
rent improvement program is limited to providing additional dispersal facilities 26
for the transport aircraft. Probably the transport and helicopter activities of Kep 27
Airfield will be transferred to Kep Ha. 28
8. TARGET ENVIRONMENT: This airfield lies in an intensively cultivated 29
valley E of the Red River Valley. Numerous small civilian settlements and villages 30
are scattered throughout the surrounding territory. 31
9. DEFENSE ENVIRONMENT: 32
 - a. The target is within the SAM envelope. 33
 - b. AAA activity has not been identified within 3NM of the target. 34
 - c. HMG and small arms fire is anticipated. 35
10. DAMAGE OBJECTIVES: Damage criteria is structural damage to support 36
buildings and storage structures in the area. Damage level is 30%. 37

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(Revised by 17th Note to Holders)

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11. EFFECT ON NVN: Destruction of these facilities would probably have little effect on the NVN air capability since this has little or no tactical or strategic air significance.

12. RECUPERABILITY: This field could be returned to operational use within 1 - 2 days after bomb craters are filled. With 30% damage to facilities, no greater delay could be expected than 1 - 2 days since there is adequate space near the field to house personnel under canvas and continue operations. It is probable that most of the workers are housed at nearby Kep Ha barracks.

13. COLLATERAL DAMAGE:

a. None

b. Population

Casualties*

Target	Area	Adjacent	Area	Target	Area	Adjacent	Area
Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ
25	0	50	0	2	0	1	0

*Casualties estimated under daylight alert conditions.

14. RECOMMENDED WEAPONS AND SORTIES:

This target is comprised of 9 areas. Three areas have been delineated for weapons application. Weapons and sorties have been computed for each area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over target are also shown:

(1) In order to achieve a damage level of 30%, weapons/sorties required over target:

WEAPON	250#	500#	500#	750#
	SNAKEYE	or SNAKEYE	or BOMB	or BOMB
Area E (400'x550')	58/3	21/2	30/3	16/3
Area F (350'x700')	41/3	22/2	33/4	18/3
Area G-1 (250'x750')	32/3	18/2	31/3	17/3
Totals	111/9	61/6	94/10	51/9

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(Revised by 17th Note to Holders)

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(2) Weapons/sorties operationally required to achieve "over target" requirements shown above:

133/11 73/7 113/12 61/11

(3) In order to achieve a damage level of 70%, weapons/sorties required over target:

WEAPON	250#	500#	500#	750#
	SNAKEYE or	SNAKEYE or	BOMB or	BOMB

Area E	128/11	70/8	100/11	53/9
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Area F	127/11	75/8	112/12	59/10
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Area G-1	108/9	59/7	104/12	55/9
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Totals	573/31	204/23	316/35	167/68
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(4) Weapons/sorties operationally required to achieve "over target" requirements shown above:

448/37 245/28 379/42 200/34

15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%

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ANNEX B TO APPENDIX A

CATEGORY B

LINE OF COMMUNICATIONS

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Annex B to
Appendix A

TAB' A TO ANNEX E TO APPENDIX A

TARGET NO. 10

13835

1. NORTH VIETNAM
2. NINE BIRTH RAILROAD AND HIGHWAY BRIDGE OVER SONIC DAY
3. 2012-2013 10334201

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 10 1
2. BE NUMBER: 616-0477 2
3. IDENTIFICATION: Ninh Binh Railroad and Highway Bridge over Song Day. 3
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4. DATE OF INFORMATION: 4 April 1965 DATE OF TIS: 25 April 1965 5
6
5. LOCATION: 20-15-40N 105-59-20E, UTM XH 032404. 7
Located on local Route 126 and the Hanoi-Vinh rail line about 0.8 NM east of Ninh Binh. 8
9
6. DESCRIPTION: Oriented northeast/southwest. 680 feet long by 23 feet wide. Three spans: two 235 feet long steel arch through truss end spans and one 210 foot open slanted steel truss swing span. Three masonry piers and masonry abutments. Probable two highway lanes superimposed over a single track rail line. Combined rail/highway horizontal clearance is 23 feet; vertical clearance is 12.5 feet. 10
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7. SIGNIFICANCE: This bridge is on local Route 126 and on the only rail line between Hanoi and Vinh. 17
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8. TARGET ENVIRONMENT: Target is a few feet above sea level and is located at the NE edge of Ninh Binh about 900 feet SE of the confluence of the Song Van and Song Day. It is across the 600 foot wide Song Day. Target is situated on a flat, wetland, rice-cultivated plain with numerous small villages. A small, isolated hill rises about 300 feet above the plain 0.5 NM S of the target. A bank of NW/SE trending steep side hills that rise to 650 feet is centered 5 NM to the WSW. The rail line extends NE and SW from the target and is paralleled by a major road. Another road extends NW from Ninh Binh. 19
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9. DEFENSE ENVIRONMENT: 30
 - a. An active 4-position light (probably 37mm) AAA site is located immediately SE of the target, within 100 yds of the south end of the bridge. An additional site of 3 or more positions may be located approximately 170 yds west of the target, on top of an apparent hill-like land protuberance. Cloud cover negates accurate identification. AW positions are located in the surrounding general area, and foxholes and trenching are likely. (DOI: 27 January 1965) 31
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 - b. Elements of the 304th Infantry Division, the 9th and 66th Infantry Regiments, the 68th Artillery Regiment and Headquarters battalions (including an AA Bn) are reported located in Ninh Binh Province. 40
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 - c. Target is located well within the GCI capability of Hanoi EW/HP radars. 44
45
10. DAMAGE OBJECTIVE: Interdiction of traffic between the Haiphong/Hanoi complex and Dong Phong Thuong. Damage criterion is collapse of at least one span. 46
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48

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11. EFFECT ON DRV: Interdiction of this bridge will eliminate through north/south rail traffic between the Haiphong/Hanoi complex and Dong Phong Thuong. Supply capability to Vinh and southern North Vietnam will be reduced significantly. North/south highway traffic could be continued on National Route 1.

12. RECUPERABILITY:

a. Rails:

(1) Estimated line capacity: TD 7 (EWPD) 2,900 ST/Day

(2) Emergency facility: Emergency ferry facility (for material only--not for loaded rail cars) and/or pontoon bridging (for motor vehicles, animal or human transportation) would result in full through-put capacity (2,900 ST/Day) after 7 days.

(3) Estimated capacity recuperability: Emergency bridge reconstruction would result in full pre-attack capacity after 4 weeks. Bridge reconstruction to pre-attack status, 4-6 months. Alternate highway ferry facilities are reported in this area. Note: The above recuperability estimates for this target are based upon the interdiction and recuperability of selected major facilities and structures of the North Vietnamese railroad system.

b. Highway: Should the target be interdicted, an immediate bypass of lower capability exists via a ferry over the Song Day located at Gian Vihau approximately six miles to the northwest. A further potential bypass exists at the lock facilities located approximately 600 yards SW of the target on the Song Van near its confluence with the Song Day. The lock facilities could be used as a terminal for limited transshipment of supplies from barges to north or south bound trucks within a few days. Replacement of one of the steel arch through truss end spans would require a span of similar construction which could take as long as two to three months depending upon availability of structural steel. One of these end spans could be replaced by a temporary span of prefabricated sections with intermediate trestle type supports within a month. Replacement of the center swing span by a stationary span could be accomplished within two weeks. (Note: Restoration of rail service would require a much more substantial reconstruction.)

13. COLLATERAL DAMAGE: Insignificant.

14. RECOMMENDED WEAPONS AND SORTIES:

a. In order to achieve the desired damage criterion, weapons/sorties required over target:

Weapon:	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	750# BOMB
	120/10		440/35		190/21		125/21

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Annex B to
Appendix A

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b. Weapons/sorties operationally required to achieve
over target requirements shown above:

146/12 537/45 232/26 152/26

15. PROBABILITY OF ACHIEVING DESIRED DAMAGE CRITERION: 85%

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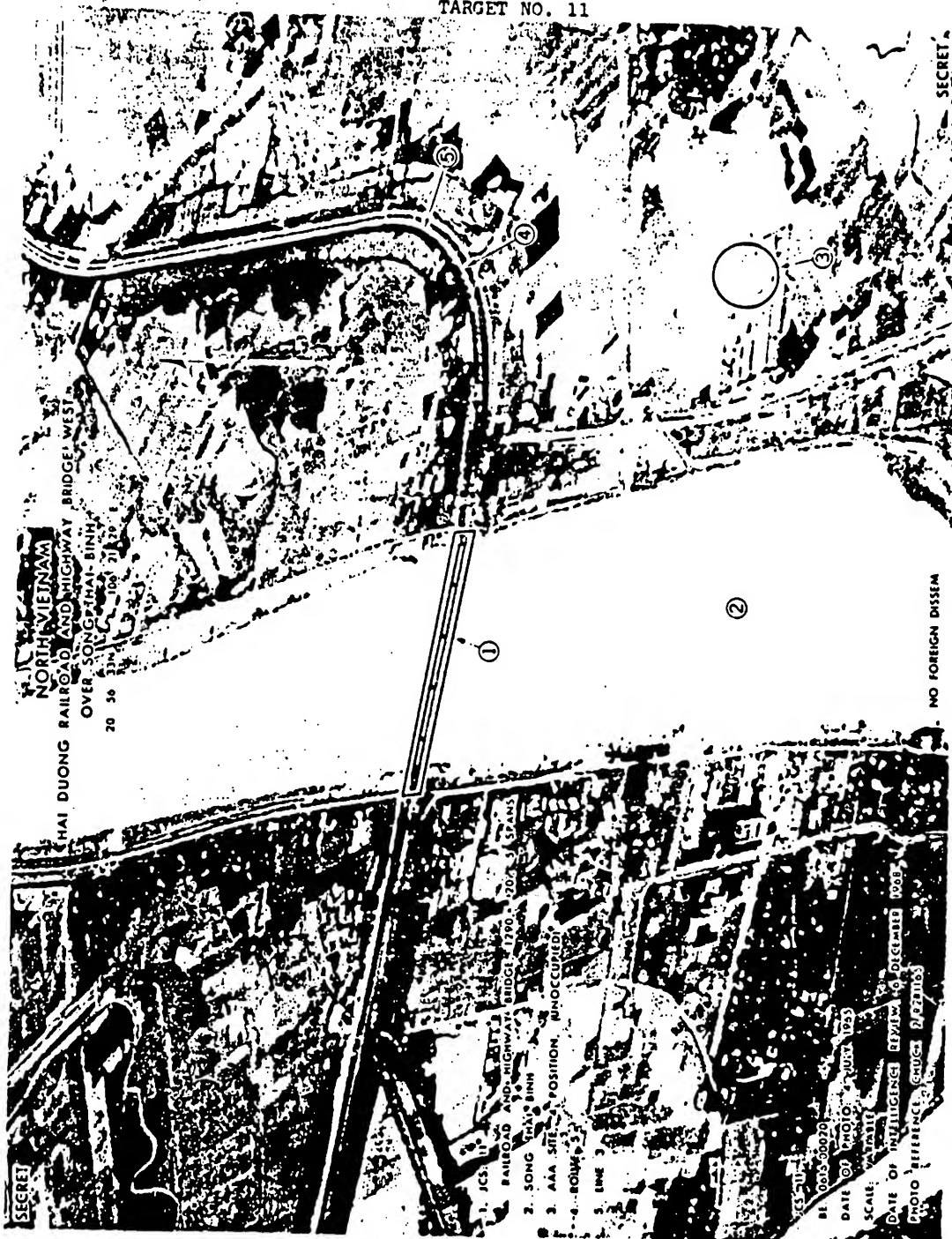
A-B-A-4

Tab A to
Annex B to
Appendix A

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TAB B TO ANNEX B TO APPENDIX A

TARGET NO. 11



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(Revised by 16th N/H)

A-B-B-1

Tab B to Annex B
to Appendix A

~~SECRET~~

TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 11 1
2. B.E. NUMBER: 616-0020 2
3. IDENTIFICATION: Hai Duong Railroad and Highway Bridge West Over Song Thai Binh 3
4
4. DATE OF INFORMATION: 5 October 1968 5
DATE OF TISD: 24 January 1969 6
DATE OF PHOTOGRAPHY: 4 July 1965 7
DATE OF INTELLIGENCE REVIEW: 6 December 1968 8
5. LOCATION: 20-56-33N 106-21-29E, located 30 NM ESE of Ha Noi. 9
6. DESCRIPTION: Bridge, oriented E/W, is 1290' long by 20' wide. 10
It has 5 steel through truss spans and masonry piers and abutments. The 11
single railroad track and single highway lane are superimposed. 12
7. SIGNIFICANCE: This is the longest bridge on the rail line and 12
primary highway connecting the port of Hai Phong and Ha Noi. Highway 13
detours are possible via routes running S of Hai Duong and Route 5. 14
8. TARGET ENVIRONMENT: Target, about 5' above sea level is 15
1.3 NM ENE of Hai Duong. Flat plains, cultivated in wetland rice and 16
containing many small meandering streams and compact villages extend 17
from target for more than 5 NM in all directions. Road and railroad 18
embankments constitute the principal relief features on the plains. 19
Target crosses generally SE flowing Song Thai Binh (river). At the 20
target, river is about 1,000' wide, and flows southward for about 3.0 21
NM before bending to the E. About 1.0 NM N of target, the river makes 22
a right-angle bend from an easterly course. 23
9. DEFENSE ENVIRONMENT: 24
 - a. The target is within the SAM envelope. 25
 - b. AAA activity has been identified within 3 NM of the target. 26
 - c. HMG and small arms fire is anticipated. 27
10. DAMAGE OBJECTIVE: Interdiction of traffic between Hai Phong 28
and Ha Noi. Damage criterion is collapse of at least one of the 3 29
center spans. 30
- *There are 4 railway bypass (bridges 616-2195-3599 and -4429 and 31
ferry 616-4430) and 4 highway bypasses (combination ferry-pontoon bridges 32
616-3687 and -3696 and ferries 616-3697 and -3698). 33

~~SECRET~~ NO FOREIGN DISSEM EXCLUDED FROM AUTOMATIC DOWNGRADING

A-B-B-2

(Revised by 16th Note to Holders)

Tab B to
Annex B to
Appendix A

~~SECRET~~

11. EFFECT ON NVN: Destruction of this bridge would halt rail traffic from the port of Hai Phong and require extensive re-routing of highway traffic.

12. RECUPERABILITY:

a. Rail:

(1) Line capacity: 9 trains/4600 ST each way per day.

(2) Emergency facility: Emergency ferry and/or pontoon bridge facility for vehicular shuttle would result in 500 to 1000 ST/Day throughput capacity after 10 days.

(3) Bridge reconstruction: Emergency bridge restoration to full capacity would require 5 to 6 weeks. Bridge reconstruction to pre-attack status would require 5 to 6 months.

b. Highway: Adjacent ferry could provide limited capacity within 1 or 2 days. Vehicular traffic over the bridge would be restored in a matter of days following restoration for rail traffic.

13. COLLATERAL DAMAGE: None.

14. RECOMMENDED WEAPONS AND SORTIES:

a. In order to achieve the desired damage criterion weapons/sorties required over target:

Weapon:	250#	500#	500#	750#
	<u>SNAKEYE</u>	or <u>SNAKEYE</u>	or <u>BOMB</u>	or <u>BOMB</u>
(1290'x20')	113/9	48/5	184/20	90/15

b. Weapons/sorties operationally required to achieve "over target" requirements shown above:

136/11	58/6	221/25	108/18
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15. PROBABILITY OF ACHIEVING DESIRED DAMAGE CRITERION:
85%

~~SECRET~~

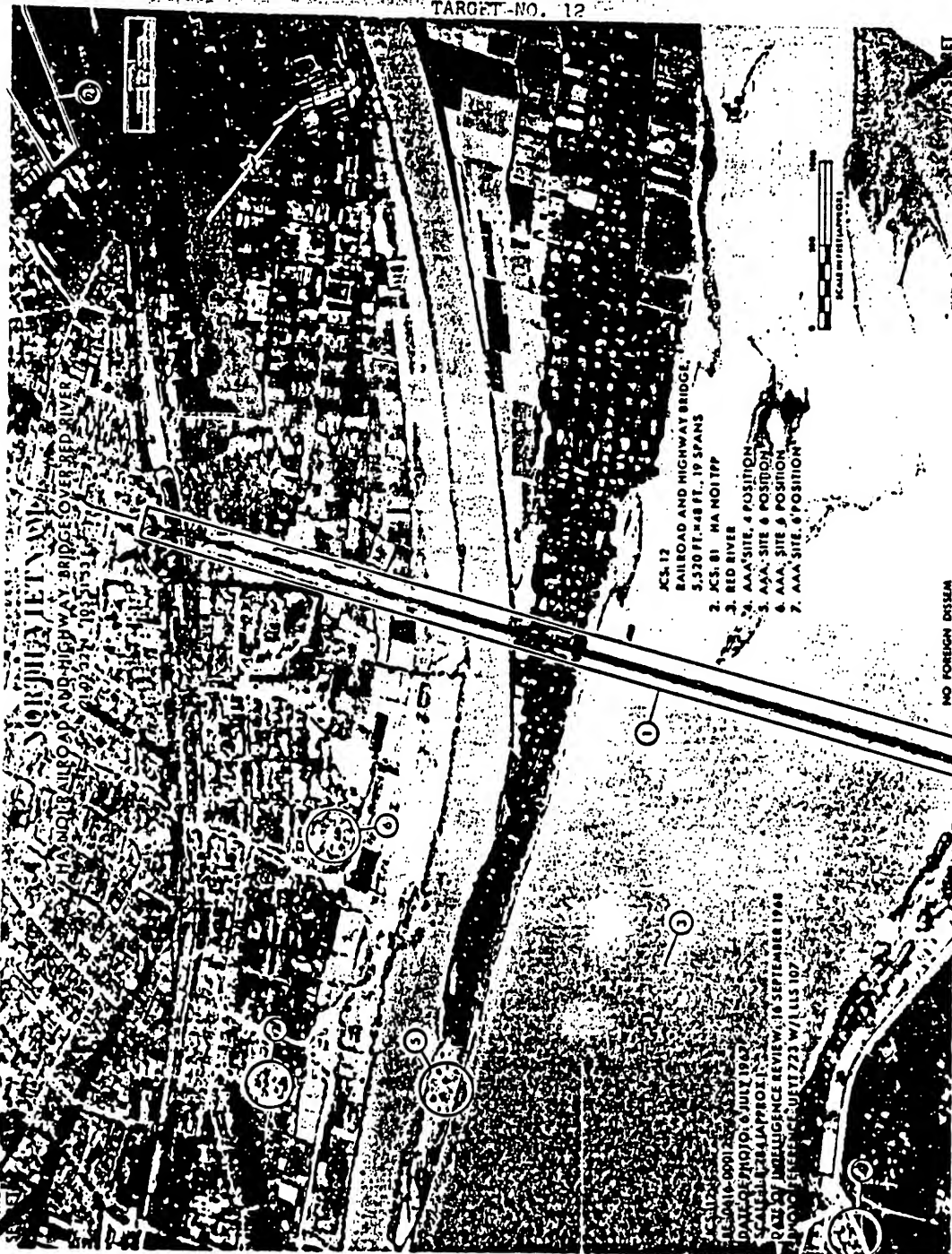
A-B-B-3

(Revised by 16th Note to Holders)

Tab B to
Annex B to
Appendix A

TAB. C TO ANNEX. B TO APPENDIX A

TARGET-NO. 12



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~~SECRET~~
Revised by 15th N/H)

A-B-C-1

Tab C-1 Annex B
to Appendix A

~~SECRET~~

TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 12 1
2. B. E. NUMBER: 616-0012 2
3. IDENTIFICATION: Ha Noi Railroad and Highway Bridge Over Red River 3
4. DATE OF INFORMATION: 3 September 1968 4
5. DATE OF TISD: 6 November 1968 5
6. DATE OF PHOTOGRAPHY: 6 July 1967 6
7. DATE OF INTELLIGENCE REVIEW: 16 September 1968 7
8. LOCATION: 21-02-32N 105-51-53E, located on NE edge of Ha Noi on the Ha Noi-Dong Dang rail line and Route 1A. 8
9
9. DESCRIPTION: Bridge, oriented ENE/WSW, is 5,520' long and 48' wide. It has 19 steel, cantilever-through-truss spans, 18 concrete piers, and concrete abutments. The single meter-gauge track passes inside the trusses, 10' wide highway lanes are located outside the trusses on each side. The bridge has a rail ferry bypass (616-3719) and rail pontoon bridge bypass (616-4292), both located well to the SE. There are 9 highway bypasses: a pontoon bridge (616-4546) and 8 ferries (616-1078, -2221, -3894, -3895, -4191, -4193, 4544, and 4545). 10
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10. SIGNIFICANCE: Trains from the port of Hai Phong, from China via either Dong Dang or Lao Cai, and from the iron and steel works at Thai Nguyen, must cross this bridge to reach Ha Noi or points S toward Vinh. This is the only highway and railroad bridge over the Red River in the Ha Noi vicinity. 17
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11. TARGET ENVIRONMENT: Target, just above sea level, is located at the NE edge of Ha Noi. It spans the Red River and a sandy island in the river. Target is situated on the low flat plain of the Red River Delta which has many streams and canals. With the exception of the built-up area of Ha Noi to the W and S and the industrial area in the vicinity of the Gia Lam airport to the E, the target area is intensively planted in wetland rice. Many villages and small towns are scattered throughout the rice-cultivated area. 21
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12. DEFENSE ENVIRONMENT: 28
a. Target is within the SAM envelope. 29
b. AAA activity has been identified within 3NM of the target. 30
c. HMG and small arms fire is anticipated 31
13. DAMAGE OBJECTIVE: Interdiction of rail traffic between Ha Noi and Hai Phong, Dong Dang, and Lao Cai, and disruption of highway traffic from the same areas. Damage criterion is collapse of at least one span. 32
33
34
14. EFFECT ON NVN: Destruction of this bridge would require rail traffic for Ha Noi and points S to be transferred to other modes of transport at least to cross the Red River. Truck traffic from the N would have to be routed from Route 1A over Routes 2 and 3, NW of Ha Noi; traffic from Hai Phong would have to be re-routed to the S and would be restricted to a ferry crossing. 35
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~~SECRET~~ NO FOREIGN DISSEM EXCLUDED FROM AUTOMATIC DOWNGRADING

A-H-C-2

(Revised by 15th Note to Holdern)

TAB C to
Annex R to
Appendix A

~~SECRET~~

12. RECUPERABILITY:

a. Rail:

(1) Line capacity: 18 Trains/8100 ST each way per day.

(2) Emergency facility: Emergency ferry and/or pontoon bridging with circuitous highway routing, would provide a maximum of 3000 ST/Day capacity after about 10 days, in the dry season. Due to flooding, considerable difficulty would be encountered in providing an emergency facility during the wet season.

(3) Bridge reconstruction: Emergency restoration to pre-attack capacity would require 2-6 months, depending on extent of destruction. Complete restoration to pre-attack status would probably require at least one year.

b. Highway:

(1) Emergency facility: Traffic destined beyond Ha Noi could be extensively re-routed; traffic to Ha Noi would be limited to the 3000 ST/Day of the highway shuttle for rail traffic.

(2) Bridge reconstruction: Vehicular traffic could be restored within a matter of days following restoration for rail traffic by decking along the tracks.

13. COLLATERAL DAMAGE: None

14. RECOMMENDED WEAPONS AND SORTIES:

a. In order to achieve the desired damage criterion, weapons/sorties required over target:

WEAPON	250# SNAKEYE	500# SNAKEYE	500# BOMB	750# BOMB
(5,520' x 48')	1145/95	231/26	839/93	127/21

b. Weapons/Sorties operationally required to achieve "over target" requirement shown above:

1374/115	278/31	1007/112	153/26
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15. PROBABILITY OF ACHIEVING DESIRED DAMAGE CRITERION: 85%

~~SECRET~~

A-11-C-3

(Revised by 15th Note to Holders)

TAB C to
Annex B to
Appendix A

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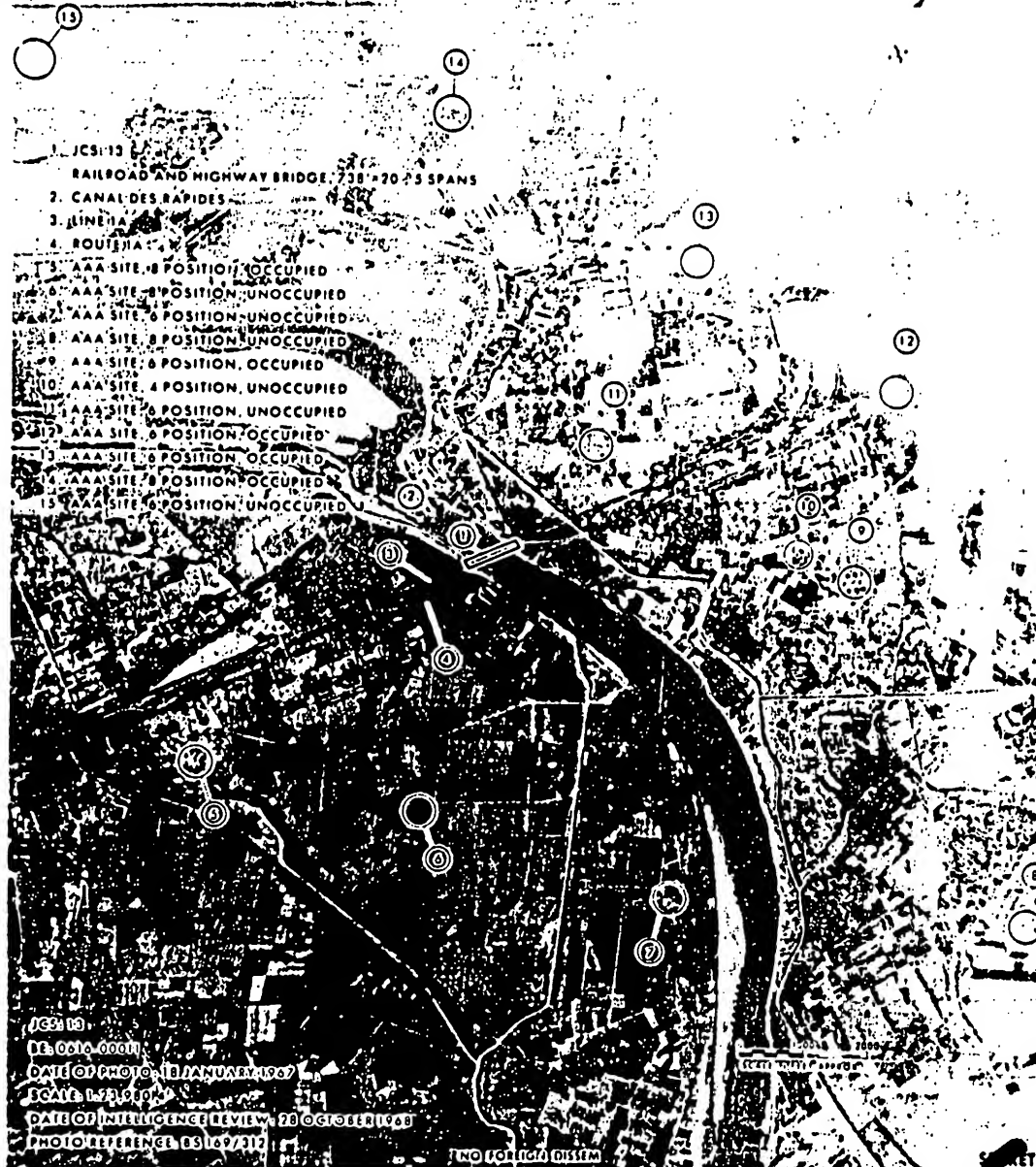
TAB D TO ANNEX B TO APPENDIX A

TARGET NO. 13

NORTH VIETNAM

HA NOI RAILROAD AND HIGHWAY BRIDGE OVER CANAL DES RAPIDES

21 04 35 N 105 34 46 E



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Revised by 16th N/H)

A-B-D-1

Tab D to Annex B
to Appendix A

~~SECRET~~

TARGET INFORMATION AND STRIKE DATA

1. **TARGET NUMBER:** 13
2. **B. E. NUMBER:** 616-0011
3. **IDENTIFICATION:** Ha Noi Railroad and Highway Bridge over Canal des Rapides.
4. **DATE OF INFORMATION:** 17 October 1968
DATE OF TISD: 23 January 1969
DATE OF PHOTOGRAPHY: 18 January 1967
DATE OF INTELLIGENCE REVIEW: 28 October 1968
5. **LOCATION:** 21-04-35N 105-54-46E, located 5 NM NE of Ha Noi on the Ha Noi - Dong Dang rail line and Route 1A.
6. **DESCRIPTION:** Bridge, oriented NE/SW, is 738' long and 20' wide. It has 4 steel through truss fixed spans (147' each), a 150' steel through truss center swing span, and 5 masonry piers. A single highway lane is superimposed over the single railroad track. There are 3 rail bypasses (2 bridges - 616-2196 and -4101 and a ferry 616-3755) and 5 highway bypasses (2 bridges - 616-3892 and -4594) and 3 ferries (616-3893, -4192, and -4593).
7. **SIGNIFICANCE:** All trains from Communist China, via either Dong Dang or Lao Cai, or from any point along the lines branching N from Yen Vien, must cross this bridge to reach Ha Noi, Hai Phong, or points S toward Vinh. Truck traffic bound for Ha Noi from the N and NE must also cross this bridge.
8. **TARGET ENVIRONMENT:** Target, about 20' above sea level, is on broad, flat plain cultivated in wetland rice and containing many compact villages. Embankments and levees are widespread, particularly NE of target, and constitute the principal relief features on the plain. Target trends NE-SW across E-W oriented Canal des Rapides, which contains large sand bars and is bordered on each side by roads. A small village is located at NE end and larger built-up areas at SW end of target. The wide, braided Red River is 3 NM SW of target and flows to SE. A large airfield (JCS #3) is located 2.5 NM SSW of target.
9. **DEFENSE ENVIRONMENT:**
 - a. The target is within the SAM envelope.
 - b. AAA activity has been identified within 3 NM of the target.
 - c. HMG and small arms fire is anticipated.
10. **DAMAGE OBJECTIVE:** Interdiction of traffic between Yen Vien (and points north, including Communist China) and Ha Noi or Hai Phong. Damage criterion is the collapse of at least one span.
11. **EFFECT ON NVN:** Destruction of this bridge would require that all rail traffic from Communist China or other points north of Yen Vien be transshipped to other modes of transport in order to reach Ha Noi. Highway traffic would have to be rerouted over Routes 2 and 3, NW of Ha Noi.

~~SECRET~~ NO FOREIGN DISSEM EXCLUDED FROM AUTOMATIC DOWNGRADING

A-B-D-2

(Revised by 16th Note to Holders)

Tab D to
Annex B to
Appendix A

~~SECRET~~

12. RECUPERABILITY:

a. Rail:

(1) Line capacity: 15 trains/5400 ST each way per day.
(2) Emergency facility: Emergency ferry and/or pontoon bridging would provide a maximum of 3000 ST/Day capacity after 10 days. Transshipment to waterways from the Yen Vien rail yard would be practical for distant destinations.

(3) Bridge reconstruction: Emergency bridge restoration to full capacity would require 3 to 4 weeks. Complete restoration to pre-attack status, except for non-operation of the swing span, would require 3 to 6 months.

b. Highway:

(1) Emergency facility: Traffic destined beyond Ha Noi could be extensively rerouted; traffic to Ha Noi would be limited to the 3000 ST/Day of the highway shuttle for rail traffic.

(2) Bridge reconstruction: Vehicular traffic could be restored within a matter of days following restoration for rail traffic.

13. COLLATERAL DAMAGE:

a. Insignificant:

b.

Population

Casualties*

Target Area		Adjacent Area		Target Area		Adjacent Area	
Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ
0	0	0	350	0	0	0	4

*Casualties estimated under daylight alert conditions.

14. RECOMMENDED WEAPONS AND SORTIES:

a. In order to achieve the desired damage criterion weapons/sorties required over target:

WEAPON	250#	500#	500#	750#
	SNAKEYE	SNAKEYE	BOMB	BOMB
(738' x 20')	114/10	49/5	189/21	92/15

b. Weapons/sorties operationally required to achieve "over target" requirement shown above:

	137/11	89/7	227/25	111/19
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15. PROBABILITY OF ACHIEVING DESIRED DAMAGE CRITERION: 85%

~~SECRET~~

A-B-D-3

(Revised by 16th Note to Holders)

Tab D to
Annex B to
Appendix A



JGS 10
11 1017 0007
DATE OF PHOTO 15 MARCH 1965
SCALE 1:100,000
DATE OF INTERVIEW 20 AUGUST 1965
PHOTO REFERENCE NUMBER 011103

NO FOREIGN DISSEM

SECRET

- TARGET INFORMATION AND STRIKE DATA**
1. **TARGET NUMBER:** 14 1
 2. **D.E. NUMBER:** 617-0002 2
 3. **IDENTIFICATION:** Thanh Hoa Railroad and Highway Bridge over Ma 3
 4. **DATE OF INFORMATION:** 7 August 1968 4
 5. **DATE OF PHOTOGRAPHY:** 19 March 1965 5
 6. **DATE OF INTELLIGENCE REVIEW:** 26 August 1968 6
 7. **LOCATION:** 19-50-12N 105-47-54E, located 3 NM NE of Thanh Hoa 7
 8. **DESCRIPTION:** Bridge, oriented E/W, 540' long, 56' wide and 10
 9. **SIGNIFICANCE:** This bridge, the longest rail and highway 11
 10. **TARGET ENVIRONMENT:** The bridge is located between two 12
 11. **DEFENSE ENVIRONMENT:** 13
 12. **DAMAGE OBJECTIVE:** 14
 13. **EFFECT ON NVN:** 15
1. **DESCRIPTION:** Bridge, oriented E/W, 540' long, 56' wide and above water level; continuous steel through-truss with two equal spans; concrete center pier and concrete abutments. A single gauge railroad track runs through the truss. Concrete decks for vehicle and pedestrian lanes are cantilevered on each side of the truss. There are two rail ferry bypasses (617-0703 and 617-0006) and three highway bypasses (617-3611, 617-3712, and 617-3713).
2. **SIGNIFICANCE:** This bridge, the longest rail and highway bridge of the 20th parallel, is a vital link for traffic between Ha Noi and Vinh. Under construction for many years, the bridge was completed in May 1964 to replace a structure destroyed in 1948. One of the many difficulties encountered during its construction, the bridge is a source of national pride and is significant as a technological as well as an interdiction target.
3. **TARGET ENVIRONMENT:** The bridge is located between two canals forming a constriction in the Song Ma, 30' above sea level, 8 NM W of the N-S trending coastline. Terrain from coast to target and in target area consists of flat wetland rice-covered areas containing scattered villages and innumerable trails. Villages are closely spaced within 2 NM of coast, widely scattered elsewhere. Complex system of levees, 1 NM wide runs N-S along a small bay 2 NM inland. Town located 500 yards N of target; treeless area running 400 ft. above sea level 3/4 NM W of target.
4. **DEFENSE ENVIRONMENT:**
- a. The target is within the SAM envelope.
 - b. AAA activity has been identified within 3 NM of the target.
 - c. HMG and small arms fire is anticipated.
5. **DAMAGE OBJECTIVE:** Interdiction of traffic between Ha Noi and Vinh, N of Thanh Hoa. Damage criterion is collapse of at least one span.
6. **EFFECT ON NVN:** Destruction of this bridge will prevent through traffic and place a heavy burden on highway traffic via other routes. National prestige will also be affected due to the great expense taken in the construction of this bridge.

NO PORTION DEEMED EXCLUDED FROM AUTOMATIC DOWNGRADING

A-R-R-2

(Revised by 15th Note to Holders)

TAB E to
Annex B to
Appendix A

12. RECUPERABILITY:

- a. Rail:
- (1) Line capacity: 3500 ST each way per day.
 - (2) Emergency facility: Reactivation of the previously existing rail ferry (617-0703) SE of the bridge would provide a minimum of about 800 ST/Day capacity within a day or so.
 - (3) Bridge reconstruction: Emergency restoration to full capacity would require about 6 weeks. Complete restoration to pre-attack status would require 6-8 months.
- b. Highway: Vehicular traffic could be restored within a matter of days following restoration for rail traffic by decking along the tracks.

13. COLLATERAL DAMAGE:

- a. Insignificant.
- b. Population:
- | Target Area | | Adjacent Area | | Target Area | | Adjacent Area | |
|-------------|-----|---------------|-----|-------------|-----|---------------|-----|
| Mil | Civ | Mil | Civ | Mil | Civ | Mil | Civ |
| 0 | 20 | 0 | 5 | 0 | 1 | 0 | 2 |
- Casualties estimated under daylight alert conditions.

14. RECOMMENDED WEAPONS AND SORTIES:

- a. In order to achieve the desired damage criterion, weapons/sorties required over target:
- | WEAPON | 250# | 500# | 500# | 750# |
|------------|----------|---------|---------|--------|
| | or | or | or | or |
| | BLAKEYE | BLAKEYE | BOMB | BOMB |
| (540 x 56) | 1221/102 | 246/27 | 925/103 | 139/23 |
- b. Weapons/sorties operationally required to achieve "over target" requirement shown above:
- | | | | | |
|--|----------|--------|----------|--------|
| | 1466/122 | 296/33 | 1110/123 | 167/28 |
|--|----------|--------|----------|--------|

15. PROBABILITY OF ACHIEVING DESIRED DAMAGE CRITERION: 85%

(Revised by 15th Note to Holders)

TAB E to
Annex II to
Appendix A



SECRET

NORTH VIETNAM
VIET-THAI RAILROAD AND HIGHWAY BRIDGE OVER RIVER

SECRET

SECRET

NO FOREIGN DISSEM

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 15 1
2. D. E. NUMBER: 616-0017 2
3. IDENTIFICATION: Viet Tri Railway and Highway Bridge Over Riviere Claire 3
4. DATE OF INFORMATION: 21 August 1968 4
- DATE OF TISD: 5 November 1968 5
- DATE OF PHOTOGRAPHY: 23 December 1965 6
- DATE OF INTELLIGENCE REVIEW: 26 August 1968 7
5. LOCATION: 21-17-55N 105-26-58E, located on the Ha Noi-Lao Cai rail line and on National Route 2, about 0.8 NM E of Viet Tri. 8
9
6. DESCRIPTION: Bridge, oriented N/S, is 970' long and 17' wide. It has four steel arch through-truss spans, three masonry piers, and masonry abutments. The single railway track is flush with the two highway lanes, inside the trusses. There is a rail bypass ferry (616-4130) and two highway bypasses: a ferry (616-4038) and a pontoon bridge (616-4039). 10
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7. SIGNIFICANCE: This bridge accommodates the only rail line and the principal highway between Ha Noi or Hai Phong and Yunnan Province, China. This is the less important of the two line-of-communication routes connecting North Vietnam and China. This line also connects the North Vietnamese apatite mines near Lao Cai with factories near Ha Noi and with the port of Hai Phong (for export). 15
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8. TARGET ENVIRONMENT: Target, about 35 feet above sea level, crosses Riviere Claire 0.8 NM ENE of Viet Tri; city located at confluence of N-S oriented, meandering Riviere Claire and NW-SE oriented Red River; continues S as Red River. Target area on flat to rolling plain cultivated in wetland rice, with scattered patches of swampland; area dotted with villages connected by local road network. A principal road and RR approach target from NW, along N bank of Red River; continue beyond target ENE to Vinh Yen, about 8.5 NM away. North of target, bordering Riviere Claire, is rolling plain; E and S of target is intensively cultivated flat plain with concentrations of villages along river bank; W of target Red River channel interrupted by small, low sand flats, separate rolling plains in NW and flat plains SW of target; rolling plains dotted with small lakes. Bordering hills and mountains, 12 to 14 NM N and NE at 1000 to 5200 feet above sea level; and 15 to 17 NM SW, 1200 to 4200 feet above sea level. 20
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9. DEFENSE ENVIRONMENT: 33
 - a. The target is within the SAM envelope. 34
 - b. AAA activity has been identified within 3NM of the target. 35
 - c. HMG and small arms fire is anticipated. 36
10. DAMAGE OBJECTIVE: Interdiction of traffic between Ha Noi and Lao Cai, located on the Chinese border. Damage criterion is collapse of at least one span. 37
38
11. EFFECT ON NVN: Destruction of this bridge will prevent through traffic between Communist China and Ha Noi, via Lao Cai, except for a reduced volume of highway traffic via an alternate highway W of Viet Tri. There is no alternate rail route. 39
40
41
42

~~SECRET~~ NO FOREIGN DISSEM EXCLUDED FROM AUTOMATIC DOWNGRADING

A-11-1-2

(Revised by 15th Note to Holders)

TAB F to
Annex II to
Appendix A

~~SECRET~~

12. RECUPERABILITY:

a. Rail

- (1) Line Capacity: 9 Trains/3700 ST each way per day.
- (2) Emergency Facility: Emergency ferry facility would provide at least 650 ST/day capacity after about 7 days.
- (3) Bridge reconstruction: Emergency restoration to full capacity would require about 5 weeks. Complete restoration to pre-attack status would require 4-8 months.

13. COLLATERAL DAMAGE:

a. Insignificant

b. Population

Casualties*

Target Area		Adjacent Area		Target Area		Adjacent Area	
Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ
0	0	0	170	0	0	0	2

*Casualties estimated under daylight alert conditions.

14. RECOMMENDED WEAPONS AND SORTIES:

a. In order to achieve the desired damage criterion, weapons/sorties required over target:

WEAPON	250#	500#	500#	750#
	SNAKEYE	or SNAKEYE	or BOMB	or BOMB
(970' x 17')	113/9	49/5	188/21	94/16

b. Weapons/Sorties operationally required to achieve "over target" requirement shown above:

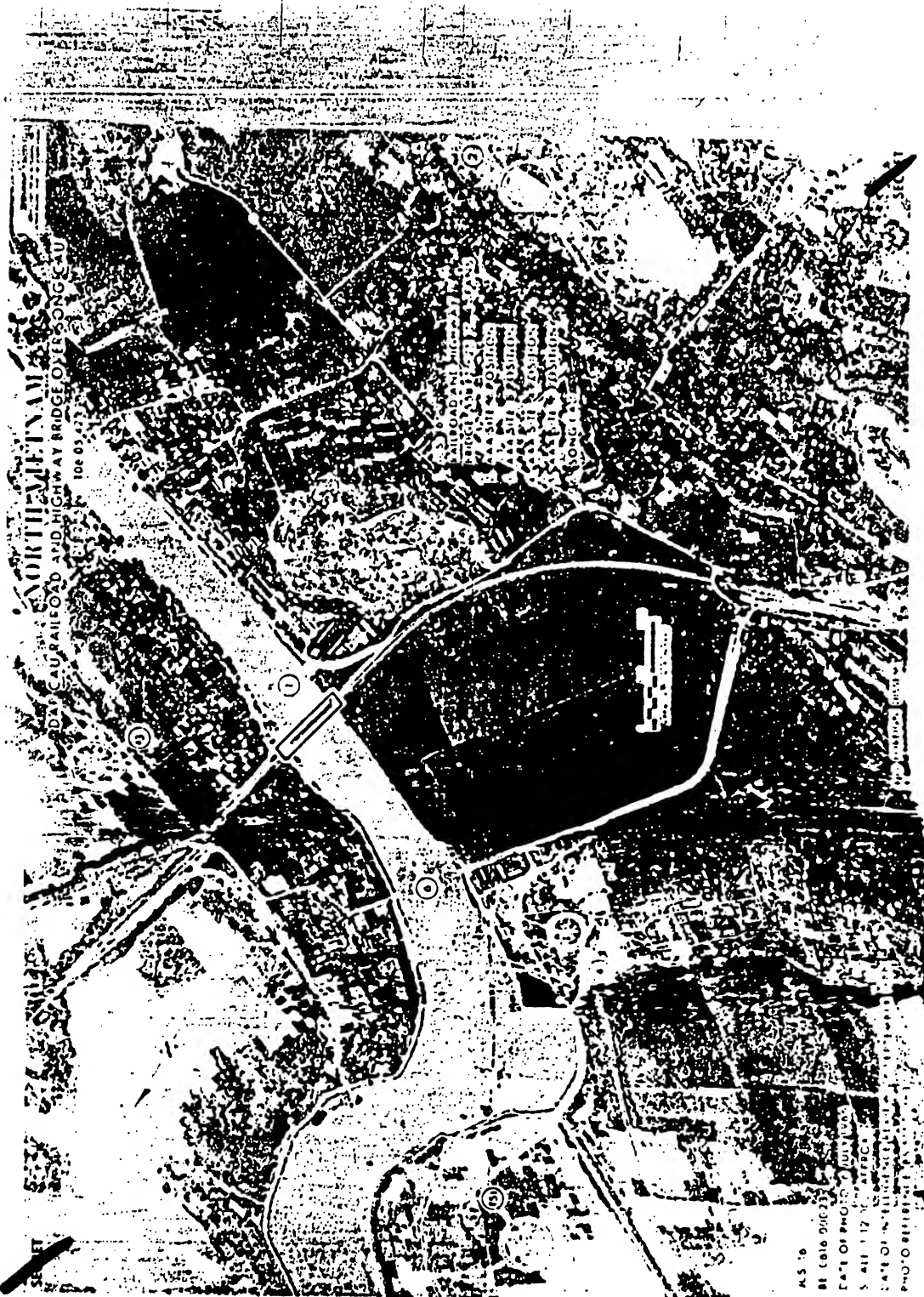
136/11	59/7	226/25	113/19
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15. PROBABILITY OF ACHIEVING DESIRED DAMAGE CRITERION: 85%

~~SECRET~~

(Revised by 15th Note to Holders)

TAB F to
Annex B to
Appendix



AS '6

BE (010 0003)

CA-1 OF PHOTOGRAPH

S 411 112 112 112

DATE OF PHOTOGRAPH

PHOTO ORIGINATED BY

~~SECRET~~

TARGET INFORMATION AND STRIKE DATA

1. **TARGET NUMBER:** 16 1
2. **D. E. NUMBER:** 616-0023 2
3. **IDENTIFICATION:** Dap Cau Railroad and Highway Bridge over Song Cau 3
4. **DATE OF INFORMATION:** 26 July 1968 4
5. **DATE OF TISD:** 5 November 1968 5
6. **DATE OF PHOTOGRAPHY:** 6 July 1966 6
7. **DATE OF INTELLIGENCE REVIEW:** 16 September 1968 7
8. **LOCATION:** 21-12-15N 106-05-42E, located on the Ha Noi-Dong Dang rail line and Route 1A, 17.4 NM NE of Ha Noi (between Yen Vien and Kep). 8
9
9. **DESCRIPTION:** Bridge, oriented N/S, is 558' long and 25' wide. It has 4 steel through-truss spans, 4 masonry piers, and masonry abutments. The second span from the S is an 80' swing span. There are 2 rail bypass bridges (616-2440 and 616-4121) and 3 highway bypasses: 2 pontoon bridges (616-3708 and 616-3726) and one ferry (616-3709). 10
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10. **SIGNIFICANCE:** This bridge is a vital link on the principal rail line connecting Ha Noi with Communist China. However, because it is located on the dual-gauge, Kep-Yen Vien portion of the line, there is a longer, standard-gauge-only alternate route (from Kep to Yen Vien) via Thai Nguyen and Kinh No. 15
16
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18
11. **TARGET ENVIRONMENT:** Target, 10 feet above sea level, crosses NW-SE oriented, leveed Song Cau (river) at Dong Ngan (town) on N bank and Dap Cau (town) on S bank. City of Bac Ninh 2.2 NM SW and Ha Noi about 17 NM SW of target site. Target area on flat, rice-cultivated plain, dotted with small villages and crossed by canals. A small hill group 130 to 170 feet above sea level, is located to the S at summit of the hill 400 yards S of target and Dap Cau. Principal road and paralleling railroad approaching target from N, and road from NW along bank of Song Cau, converge at target bridge; continue SW beyond target to Bac Ninh and Ha Noi. North of target, plain interrupted by isolated hills, 250 to 400 feet above sea level; ENE of target, about 3.5 NM plain divided by narrow, E/W oriented ridge, 400 to 750 feet above sea level. Plain continues S of target for 8 NM to Canal des Rapides; and W for more than 10 NM. 19
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12. **DEFENSE ENVIRONMENT:** 31
 - a. Target is within the SAM envelope. 32
 - b. AAA activity has been reported within 3NM of the target. 33
 - c. HMG and small arms fire is anticipated. 34
13. **DAMAGE OBJECTIVE:** Interdiction of rail traffic between Kep and Yen Vien, on the direct dual-gauge portion of the Ha Noi-Dong Dang rail line. Damage criterion is the collapse of at least one span. 35
36
37
14. **EFFECT ON NVN:** Destruction of this bridge would prevent through rail traffic (meter gauge) to Ha Noi and require standard gauge traffic to Yen Vien to be routed over the longer (32 NM) Thai Nguyen - Kinh No alternate route. 38
39
40
15. **RECUPERABILITY:** 41
 - a. Rail: 42
(1) Line capacity: 9 Trains/6000 ST each way per day. 43

~~SECRET~~ NO FOREIGN DISSEM EXCLUDED FROM AUTOMATIC DOWNGRADING
(Revised by 15th Note to Holders)

A-B-G-2

TAB G to
Annex B to
Appendix A

~~SECRET~~

(2) Emergency facility: Emergency ferry and/or pontoon bridge would permit 1000 to 2000 ST/Day highway shuttle after 7 days.

(3) Bridge Reconstruction: Emergency bridge restoration to full capacity would require about 5 weeks. Complete restoration to pre-attack status could require as much as one year (reconstruction of the swing-span would impede completion; without this feature, restoration should require only 4-6 months).

(4) Highway: Vehicular traffic could be restored within a matter of days following restoration for rail traffic by decking along the rails.

13. COLLATERAL DAMAGE: None.

14. RECOMMENDED WEAPONS AND SORTIES:

a. In order to achieve the desired damage criterion, weapons/sorties required over target:

WEAPON:	250#	500#	500#	750#
	SNAKEYE	or SNAKEYE	or BOMB	or BOMB
(558' x 25')	1152/96	234/26	920/102	147/25

b. Weapons/Sorties operationally required to achieve "over target" requirement shown above:

	383/115	281/31	1104/123	177/30
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15. PROBABILITY OF ACHIEVING DESIRED DAMAGE CRITERION: 85%

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#16

(Revised by 15th Note to Holders)

A-II-G-3

TAB n to
Annex n to
Appendix A

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TARGET INFORMATION SHEET AND STRIKE DATA

1. TARGET NUMBER: 17 1
2. BE NUMBER: 616-0332 2
3. IDENTIFICATION: Hai Phong Hwy Br ov Song Da Bach 3
4. DATE OF INFORMATION: September 1965 4
5. DATE OF TISD: 24 June 1969 5
6. DATE OF PHOTOGRAPHY: 20 July 1965 6
7. DATE OF INTELLIGENCE REVIEW: 16 April 1969 7
8. LOCATION: 21-00-12N 106-41-25E, located on North Vietnam Route 189, 10 NM N of Hai Phong. 8
9
9. DESCRIPTION: Oriented NNE/SSW; overall dimensions 1,780' x 15'; 10
16 concrete deck-type spans on concrete pile piers, one steel lift span 11
in center 135' long. The Song Da Bach is deep at this point and used for 12
navigation. This bridge is one of a series of 5 long bridges of similar 13
construction over 500' long within a 5-NM length of the highway. The roadway 14
is embanked throughout. 15
7. SIGNIFICANCE: Target is on a relatively new bypass road, skirting a 16
previous bottleneck at the Quan Yen Ferry site (Route 10). It is on the 17
principal route from Hai Phong to NE North Vietnam and South China through 18
Mong Cai via the junction with Route 18. Center lift span is required for important 19
waterborne traffic. 20
8. TARGET ENVIRONMENT: Road passes through a low-lying tidal 21
flatland, with rice cultivation predominating S of the target. Some limestone 22
hills to the NE are also cultivated and contain small hamlets, but the 23
predominant land feature to the N is wet, uncultivated flatland. The area is 24
interspersed with many wide tidal streams. A bypass exists via the Quan Yen 25
Ferry, a slow and limited capacity 5,000' crossing, located approximately 7 NM SE. 26
9. DEFENSE ENVIRONMENT: 27
 - a. The target is within the SAM envelope. 28
 - b. AAA activity has been identified within 3 NM of the target. 29
 - c. HMG and small arms fire is anticipated. 30
10. DAMAGE OBJECTIVE: Interdiction of traffic between Hai Phong 31
and South China. Damage criterion is destruction of center lift-span. 32
11. EFFECT ON NVN: Interdiction of this target would slow traffic on 33
this route, forcing the use of the slower ferry bypass to the SE. 34
12. RECUPERABILITY: Immediate bypass of the bridge could be accomplished 35
by way of the Quang Yen Hwy Ferry (BE 616-1035) located 6 NM to the SE on 36
Route 10 and the Hai Phong Hwy Ferry North (BE 616-3898) located 4 NM to the W 37
on Route 1084. Temporary replacement of a destroyed deck type span with 38
limited capacity timber trestle supported deck span could be accomplished in 7 to 39
10 days. Reconstruction of the short concrete spans and the main span to previous 40
capability would take up to one to two months. However, this assumes 41
installation of a fixed center span which would become an obstacle to navigation. 42

~~SECRET~~ NO FOREIGN DISSEM EXCLUDED FROM AUTOMATIC DOWNGRADING

A-B-H-2

(Revised by 17th Note to Holders)

Tab H to
Annex B to
Appendix A

~~SECRET~~

14. COLLATERAL DAMAGE: None

15. RECOMMENDED WEAPONS AND SORTIES:

a. In order to achieve the desired damage criterion, weapons/sorties required over target:

WEAPON	250#	500#	500#	750#
WEAPON	Snakeye	Snakeye	BOMB	BOMB
Center Lift				
Span (135' x 15')	323/27	142/16	615/68	316/53

b. Weapons/sorties operationally required to achieve "over target" requirement shown above:

386/32	170/19	738/82	379/61
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15. PROBABILITY OF ACHIEVING DAMAGE CRITERION: 85%

~~SECRET~~

A-B-H-3

(Revised by 17th Note to Holders)

Tab H to
Annex B to
Appendix A

TARGET NO. 18

SECRET

NORTH AVENUE
LAPING SON RAILROAD AND HIGHWAY BRIDGE OVER SONG NY CUNG

RAILROAD AND HIGHWAY BRIDGE 295-20, 2 SPANS
AA AND POSITION: UNOCCUPIED
AA AND POSITION: UNOCCUPIED
SONG-17, CUNG

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WORLD FOREIGN DISSEM

Lead by 17th N/H)

A-B-I-1

Tab I to Annex B
to Appendix A

NET

TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 18 1
2. B.E. NUMBER: 616-0025 2
3. IDENTIFICATION: Lang Son Railroad and Highway Bridge over Song 3
Cung. 4
4. DATE OF INFORMATION: 8 September 1968 5
DATE OF TIS: 4 November 1968 6
DATE OF PHOTOGRAPHY: 2 November 1966 7
DATE OF INTELLIGENCE REVIEW: 16 September 1968 8
5. LOCATION: 21-50-52N 106-45-42E, located on the Ha Noi-Dong Dang 9
line, 12 NM S of the Communist China border, and on Route 1A, just 10
of its junction with Route 4. 11
6. DESCRIPTION: Bridge, oriented NW/SE, is 295' long and 20' wide. 12
has 2 steel through-truss spans with a single dual gauge track and 13
superimposed highway deck. There are 2 rail bypass bridges (616-2190 14
616-3224) and 5 highway bypasses: 3 bridges (616-3701, 616-3702, 15
616-3850), a causeway (616-4548), and a ferry (616-4547). 16
7. SIGNIFICANCE: The northernmost and longest of the 3 relatively 17
bridges on the Dong Dang-Kep portion (dual gauge) of the Ha Noi- 18
Dang rail line. The only alternate connection between Ha Noi and 19
Communist China is from Kun-ming, in China, through Lao Cai. Alternate 20
way routes are located near the coast. 21
8. TARGET ENVIRONMENT: Target, about 860 ft. above sea level, is 22
edge of Lang Son. Song Ky Cung (river) flows generally to the NW. 23
set in a small oval basin which extends 2.5 NM NW, one NM NE, 2 NM SE, 24
0.7 NM SW of target. Basin floor flat; cultivated in rice. Basin en- 25
ced by partially brush-covered hills; hilltops within 5 NM of target 26
1300 ft. above sea level; peak 3 NM to NW is 2625 ft. above sea 27
1. Within 10 NM of target, many peaks exceed 2000 ft. elevation. 28
ft. peak 13 NM E of target. 29
9. DEFENSE ENVIRONMENT: 30
- a. Target is not within the SAM envelope. 31
- b. AAA activity has been identified within 3 NM of the target. 32
- c. HMG and small arms fire is not anticipated. 33
10. DAMAGE OBJECTIVE: Interdiction of traffic between Communist 34
and North Vietnam. Damage criterion is the collapse of at least 35
span. 36
11. EFFECT ON NVN: Destruction of this bridge would halt rail 37
traffic and hamper highway traffic between North Vietnam and Communist 38
China. 39

NET NO FOREIGN DISSEM EXCLUDED FROM AUTOMATIC DOWNGRADING

A-B-I-2

(Revised by 17th Note to Holders)

Tab I to
Annex B to
Appendix A

~~SECRET~~

12. RECUPERABILITY:

- a. Rail:
- (1) Line capacity: 9 Trains each way/6100 ST southward per day.
 - (2) Emergency facility: Emergency ferry and/or pontoon bridge would permit 1000-2000 ST/Day highway shuttle after 7 days.
 - (3) Bridge reconstruction: Emergency bridge restoration to full capacity would require 3-5 weeks. Complete restoration to pre-attack status would require 3-5 months.
- b. Highway: Vehicular traffic could be restored within a matter of days following restoration for rail by re-installing a superimposed highway deck.

13. COLLATERAL DAMAGE:

- a. Light damage to surrounding area.

- b. Population

Casualties*

Target Area		Adjacent Area		Target Area		Adjacent Area	
Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ
0	0	0	650	0	0	0	7

*Casualties estimated under daylight alert conditions.

14. RECOMMENDED WEAPONS AND SORTIES:

- a. In order to achieve the desired damage criterion, weapons/sorties required over target:

WEAPON	250#	500#	500#	750#
	SNAKEYE	SNAKEYE	BOMB	BOMB
	1587/132	323/36	1351/150	223/37
b. Weapons/sorties operationally required to achieve "over target" requirement shown above:				
	1905/159	388/43	1622/180	268/45

15. PROBABILITY OF ACHIEVING DESIRED DAMAGE CRITERION: 85%

~~SECRET~~

A-B-I-3

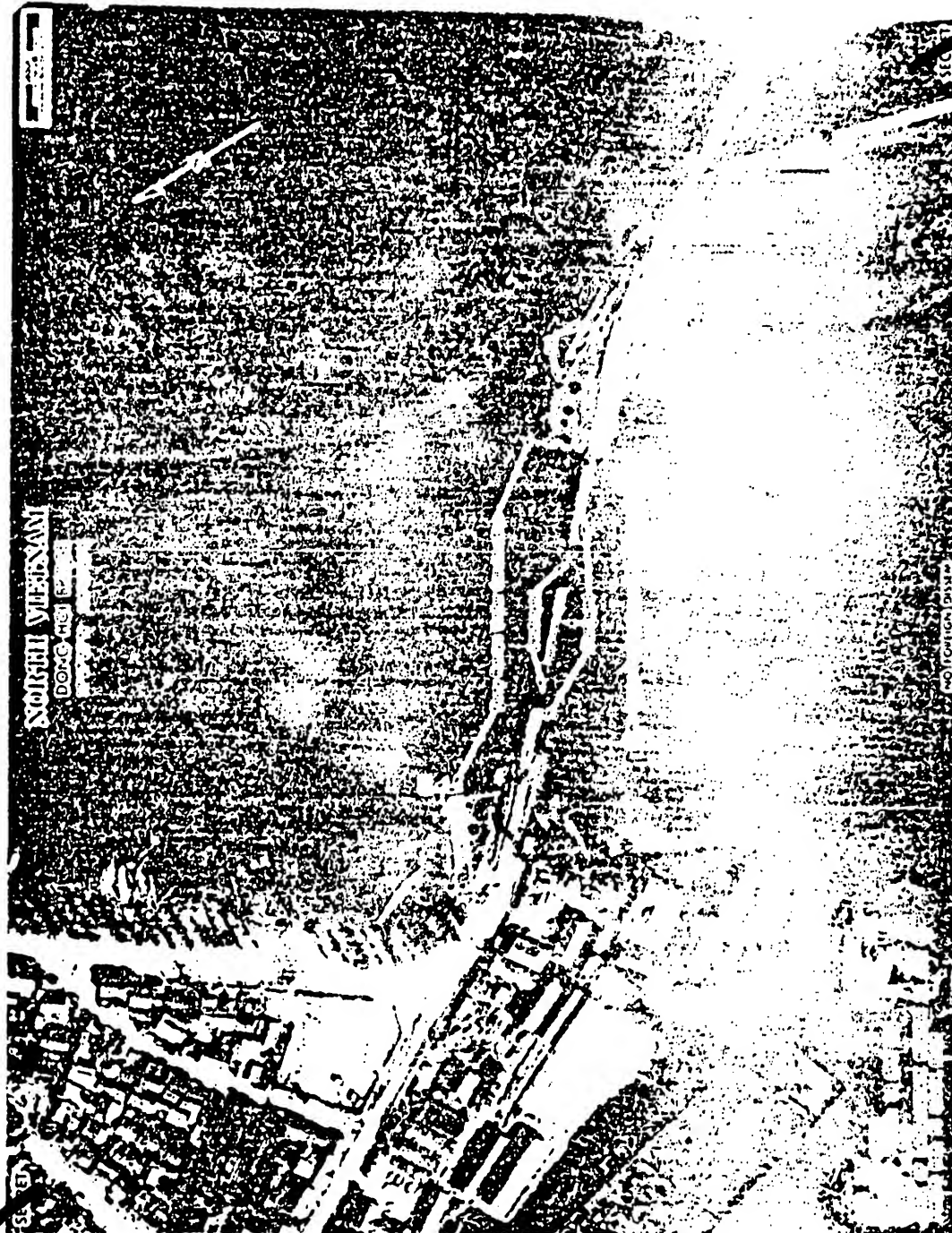
(Revised by 17th Note to Holders)

Tab I to
Annex B to
Appendix A

~~TOP SECRET~~

TAB J TO ANNEX B TO APPENDIX A

TARGET NO. 15.1



~~TOP SECRET~~

A-3-J-1

Tab J to Annex B
to Appendix A

~~TOP SECRET~~

~~TOP SECRET~~

TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 18.1 1
2. BE NUMBER: 617-0018 2
3. IDENTIFICATION: Dong Hoi Hwy Br on Rao Lu Ky 3
4. DATE OF INFORMATION: 14 April 1966 DATE OF TIS: 20 June 1966 4
5
5. COORDINATES: 17-47-27N 106-37-50E, UTM XE 732307. Located on VII Route 1 just S of Dong Hoi. 6
7
6. DESCRIPTION: Oriented NW/SE; 400' x 13'; 13 half through steel truss spans, concrete piers, extended on south end by caisson and single span concrete deck bridge. Ferry ramps are being constructed on a rubble fill; north ramp is 105' x 18'; south ramp is 200' x 18'. The embanked ramps extend into a shallow portion of the river. No barges yet apparent in area. 8
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7. SIGNIFICANCE: The target lies on the primary coastal Route 1 between Dong Hoi and Routes 102 and 103 which serve the infiltration corridor into Laos and southern Vietnam. 15
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8. TARGET ENVIRONMENT: This target is located over the tidal estuary of the Rao Lu Ky less than 2 NM west of the Tonkin Gulf coast. The surrounding area is deltaic flat with the southern edge of the Dong Hoi urban development bordering the northern embankment approach to the bridge site and no outstanding obstructions noted. Off-road movement in immediate area of the river crossing appears difficult. 18
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9. DEFENSE ENVIRONMENT: There are 2 active light (10.5mm/37mm) AAA sites in the area containing 6 occupied positions. Within 4 nm are 15 inactive sites containing 70 unoccupied positions (DRI: 14 Feb - 28 Apr 65). 4 EW radars are reported in the vicinity. Overall military strength in the Dong Hoi area may be as high as 3,000 and small arms and AW fire may be anticipated. 25
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10. DAMAGE OBJECTIVE: Interdiction of traffic between Dong Hoi and Routes 102 and 103. Damage criterion is destruction at least one span. 31
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33
11. EFFECT ON NVN: Interdiction would require highway traffic to be rerouted via a combination of Routes 105 and 101. 34
35
12. RECOVERABILITY: Probable recoverability would be the reconstruction of the ferry ramps which could be accomplished in 2 weeks with a concentrated effort. Replacement of destroyed spans could be accomplished in six to eight weeks, but would probably not be attempted, based on the current activity at the site. 36
37
38
13. COLLATERAL DAMAGE: Insignificant. 39
40

~~TOP SECRET~~

A-B-J-2

(Revised by 8th Note to Holders)

Tab J to
Annex H to
Appendix A

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TOP SECRET

14. RECOMMENDED WEAPONS AND SORTIES:

a. In order to achieve the damage level of 85%, weapons/
sorties required over target:

Weapon: 250# SNAKEYE or 250# BOMB or 500# BOMB or 750# BOMB

55/5 215/18 135/15 115/19

b. Weapons/sorties operationally required to achieve
"over target" requirements shown above:

67/6 262/22 164/18 140/23

15. PROBABILITY OF ACHIEVING DESIRED DAMAGE CRITERION: 85%

~~TOP SECRET~~

A-B-J-3

Tab J to
Annex B to
Appendix A

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TAB K TO ANNEX B TO APPENDIX A

TARGET NO. 18.11



~~TOP SECRET~~

A-B-K-1

Tab K to Annex B
to Appendix A

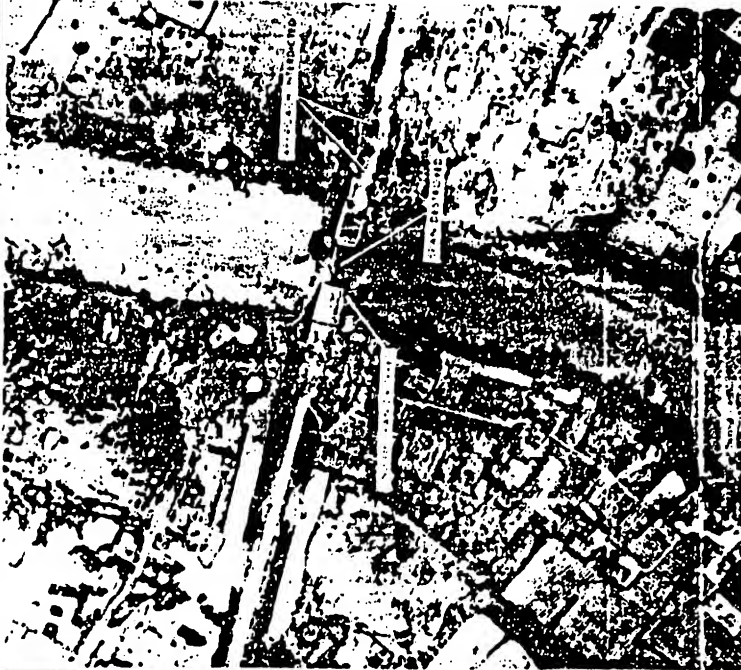
~~TOP SECRET~~

TAB K TO ANNEX P TO APPENDIX A

TARGET NO. 18.11

JCS 18.11
NORTH VIETNAM
MY DUC HIGHWAY BRIDGE
17 13 55N 106 42 15E

POST STRIKE



MSN: BT 10304
DATE: 22 APR 65
FRM: LSV 223

~~SECRET~~

PRE STRIKE



MSN: BT 10304
DATE: 6 APR 65
FRM: RSV 064

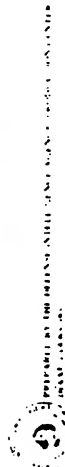
BE NO 617 0631

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A-B-K-1a

Tab K to Annex P
to Appendix A



~~TOP SECRET~~

TOP SECRET

TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 18.11 1
2. BE NUMBER: 0617-00631 2
3. IDENTIFICATION: My Duc Highway Bridge over Khe Cam Ly 3
4. DATE OF INFORMATION: March 1965 4
DATE OF TIS: 9 April 1965 5
5. LOCATION: 17-13-55N/106-42-15E, 48Q XE 809057. Located 6
on North Vietnam Route 101, approximately 17 air miles SSE of 7
Dong Hoi. 8
6. DESCRIPTION: Oriented NW/SE, the bridge has overall 9
dimensions of 190 ft x 29 ft, with three reinforced concrete 10
deck spans. It was built within the past 2 or 3 years to 11
replace a ferry bottleneck. Bridge on abandoned rail line, 12
with one steel truss span dropped into the stream, is located 13
in the vicinity of the target. Possible seasonal ford/ferry 14
exists within 1,000 yards downstream of the bridge. 15
7. SIGNIFICANCE: The target lies on Route 101, an impor- 16
tant alternate to Route 1 from Dong Hoi to the DMZ. Route 17
101 also serves infiltration routes into southern Laos and 18
South Vietnam. 19
8. TARGET ENVIRONMENT: The Khe Cam Ly is sluggish and 20
shallow in the dry season with some rock out croppings visible; 21
it appears to be at least seasonally fordable. The terrain 22
surrounding the target is generally flat rice paddy land 23
interspersed with small villages and interconnecting trails. 24
A large cemetery area is located 1/2 mile SW of the target. 25
Karst topography within 5 miles W of the target has peaks up 26
to 1,000 feet in elevation. An abandoned railroad generally 27
follows the road for several miles north and south of the 28
target. 29
9. DEFENSE ENVIRONMENT: No known AAA sites are located in 30
the area of the target; the nearest sites being located at Xom 31
Bang approximately 7 NM south-southeast of the target, in the 32
Dong Hoi area, 11 1/2 NM north-northwest, and in the Chap Le area 33
15 NM southeast. Nearest radars are within 10 NM of 34
1710N/10622E (near Lang Mo), at Dong Hoi (18 NM distant), and 35
at Vinh Linh (25 NM away). (DOI: 26 February 1965). 36
10. DAMAGE OBJECTIVE: Destruction of center span. 37
11. EFFECT ON DRV: Should this target be interdicted 38
logistic traffic on the inland alternate to Route 1 will be 39
delayed until such by-pass as the previous ferry operation 40
may be reinstated. Transient capacity will be reduced. 41
12. RECUPERABILITY: Likely bypass operations during current 42
low water conditions would be the installation of a low capa- 43
city pontoon bridge which could be operational within a week. 44
Temporary restoration by trestling for a low capacity crossing 45
could be accomplished in a week to 10 days. With the north 46
pier destroyed full restoration of the bridge will require 47
from two to three months. Unstable streambed conditions 48
would require extensive bottom preparation for fording 49
operations. 50

~~TOP SECRET~~

A-B-K-2

Tab K to
Annex B to
Appendix A

TOP SECRET

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13. COLLATERAL DAMAGE: Insignificant.

14. RECOMMENDED WEAPONS AND SORTIES:

a. In order to achieve the damage level of 85%,
weapons/sorties required over target:

Weapon:	250#	500#	750#	GAM
	<u>SNAKEYE</u>	or <u>BOMB</u>	or <u>BOMB</u>	or <u>83-A</u>
	130/11	230/26	290/32	62/31

b. Weapons/sorties operationally required to achieve
"over target" requirements shown above:

155/13	282/32	354/39	79/38
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15. PROBABILITY OF ACHIEVING DAMAGE CRITERION: 95%

~~TOP SECRET~~

A-B-K-3

Tab K to
Annex B to
Appendix A

(Revised by 7th Note to Holders)

~~TOP SECRET~~
 TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 17-12

2. IN NUMBER: 617-0259

3. IDENTIFICATION: Xom Phuong Hwy Bns ov Song Dinh

4. DATE OF INFORMATION: March 1965 DATE OF TIS: 20 June 1966

5. LOCATION: 17-32-47N 106-33-04E, XE 645406. Located on North Vietnam Route 1, approximately 7 NM NW of Dong Hoi.

6. DESCRIPTION: The target consists of two bridges oriented NW-SE and separated by 145 feet. The NE bridge is a 185' x 14' reinforced concrete deck bridge on possibly two spans. The NW bridge is a former rail bridge converted for highway use. It has overall dimensions of 300' x 14'; 6 span structure of reinforced concrete. Under type construction with concrete deck and steel beams.

7. SIGNIFICANCE: The target lies on Route 1 controlling traffic between Dong Hoi and Thanh Hoa.

8. TARGET ENVIRONMENT: The target crosses the meandering Song Dinh on the flat Tonkin Coastal Plain. The surrounding area is sparsely populated and generally cultivated. The Song Dinh is diked in the area of the target and at best only seasonably fordable. Off-road movement is difficult.

9. DEFENSE ENVIRONMENT:

a. Dong Hoi A/P is only 2.5 NM SE and Dong Hoi is approximately 6 NM. In this area are 7 active AAA sites, with 29 light (14 5mm-37mm) AAA positions occupied and 4 positions unoccupied. Overall count in the Dong Hoi area also includes 10 inactive sites, with 47 unoccupied positions. (DOI: 14 Feb)

b. 4 EW radars located in the area.

c. Within a 1000-1200 yds both S and W of the target are training areas with several trenches and AW positions. There are also many vehicle tracks and trails. Operational regiments of the 325th Division have trained in the area.

10. DAMAGE OBJECTIVE: Interdiction of traffic between Dong Hoi and Thanh Hoa. Damage criterion is destruction of at least span on each bridge.

11. EFFECT ON NVN: Should this target be interdicted, the flow of supplies from the north to the Dong Hoi staging area would be interrupted for less than one week and probably resumed at lower rate.

12. RECOVERABILITY: The NE bridge may be placed back into service within 7 to 10 days by use of earth fill on the southern approach, and construction of an earth ramp to the serviceable 5th span. To secure an all season crossing, the high level SW bridge may be restored within 5 weeks with assistance of a crane to reset the dropped span and realign the 3 displaced spans. Patching of the damaged pier and ramping of former north shore span can be effected within this time estimate also.

~~TOP SECRET~~

A-B-L-2

Tab I, to
 Annex B to
 Appendix A

(Revised by 8th Note to Holders)

~~TOP SECRET~~

13. COLLATERAL DAMAGE: Light

14. RECOMMENDED WEAPONS AND SORTIES:

a. This target complex consists of two bridges.
Weapons and sorties have been computed for each bridge.
To show the effort required to achieve the damage criterion
prescribed, total weapons/sorties required over the target
is also shown:

(1) In order to achieve the desired damage criteria,
weapons/sorties required over target:

Weapon:	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	750# BOMB
West Bridge	67/5		270/23		160/18		140/24
East Bridge	200/17		420/35		250/28		205/34
Totals	267/23		690/58		410/46		345/57

(2) Weapons/sorties operationally required to achieve
"over target" requirement shown above:

326/28	841/71	500/56	421/70
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15. PROBABILITY OF ACHIEVING DAMAGE CRITERION: 85%

~~TOP SECRET~~

A-B-L-3

Tab L to
Annex B to
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TAB M TO ANNEX B TO APPENDIX A

TARGET NO. 18.13



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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 18.13 1
2. BE NUMBER: 617-0515 2
3. IDENTIFICATION: Kim Cuong Highway Bridge Southwest
over Nam Chot 3
4
4. DATE OF INFORMATION: July 1964 DATE OF TIS: 5
9 April 1965 6
5. LOCATION: 18-26-00N/105-13-25E, UTM 48Q WF 236380. 7
Located on VN Route 8 approximately 10 miles east of LA/VN 8
border. 9
6. DESCRIPTION: Oriented NE/SW, overall dimensions approxi-10
mately 165 x 15 feet; probably 4 spans, concrete beam with 11
concrete deck; unlimited vertical clearance; concrete piers 12
and abutments. Southern approach passes through an approxi- 13
mate 300 ft. defile cut obliquely through a narrow ridge line. 14
7. SIGNIFICANCE: This bridge is just NE of the Keo Neua 15
Pass. 16
8. TARGET ENVIRONMENT: Target spans a deep ravine with 17
overgrown banks. Stream is generally unfordable. Terrain 18
within several miles of target is rugged and heavily forested; 19
off-road movement is limited. 20
9. DEFENSE ENVIRONMENT: In the immediate vicinity of this 21
bridge there are two inactive AAA sites, each site comprising 22
4 light unoccupied positions. In addition, there is another 23
inactive site of 4 light unoccupied positions at Rao Qua, 24
6 NM NE of the target. There are no known radar in the area, 25
and the only installations known are small support camps 26
spotted along the road. It is probable that there are at 27
least 50% civilians. Collateral damage negligible. 28
10. DAMAGE OBJECTIVE: Interdiction of highway traffic 29
between NVN and Laos. Damage criterion is destruction of 30
at least one span. 31
11. EFFECT ON DRV: Interdiction will delay the movement of 32
DRV military traffic from Vinh to the PL/VC forces in the Nape 33
area and halt the flow of supplies south to the junction with 34
Laos Route 12. This traffic would have to be re-routed to VN 35
Route 15/12 and into Laos via the Mu Gia Pass. By-pass of 36
this bridge is difficult. 37
12. RECUPERABILITY: Replacement materials necessary to 38
repair the structure to near full capacity can be obtained 39
from stocks in the Vinh area without difficulty. Temporary 40
repairs could be accomplished within 5 days. Reactivation 41
of a nearby ford located approximately 500 ft east of the 42
target could provide a limited by-pass capability within 43
two to three days. 44

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A-B-M-2

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13. COLLATERAL DAMAGE: Insignificant.

14. RECOMMENDED WEAPONS AND SORTIES:

a. In order to achieve the damage level of 85%
Weapons/ sorties required over target:

Weapon:	250#	250#	500#	GAM
	<u>SNAKEYE</u>	or <u>BCMB</u>	or <u>BOMB</u>	or <u>83-A</u>
	105/9	450/38	260/29	44/22

b. Weapons/sorties operationally required to achieve
"over target" requirements shown above:

128/11	550/46	317/35	54/27
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15. PROBABILITY OF ACHIEVING DESIRED DAMAGE CRITERION: 85%

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A-B-M-3

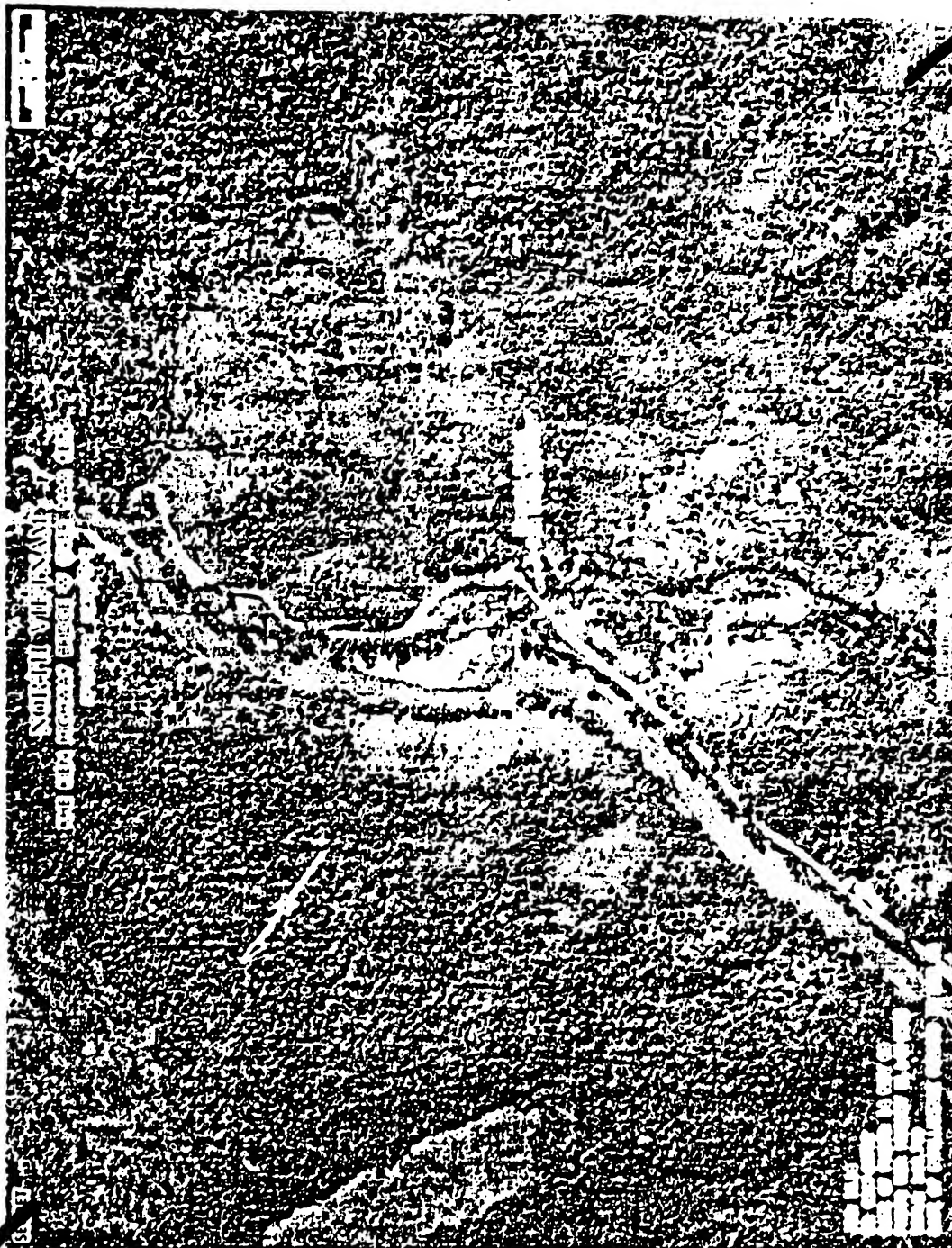
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TAB N TO ANNEX B TO APPENDIX A

TARGET NO. 18.14



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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 18.14 1
2. BE NUMBER: 0617-000782 2
3. IDENTIFICATION: Khe Kien Highway Bridge West over
Nam Kien 3
4. DATE OF INFORMATION: November 1964. 5
DATE OF TIS: 1 March 1965 6
5. LOCATION: 19-16-21N/104-21-35E, UTM VG 320310. Located
approximately 5 miles west of Cua Rao on VN Route 7. 7
8
6. DESCRIPTION: Oriented E/W, this bridge has overall
dimensions 340 ft x 18 ft, 3 spans with deck type modern rein- 10
forced concrete haunched T-Beam construction on concrete piers. 11
This structure was newly erected in 1964 replacing a ford/ferry 12
crossing. 13
7. SIGNIFICANCE: This target is a prime example of modern 14
bridging being installed along Route 7 as part of a major 15
improvement project to increase the traffic capacity of this 16
major LOC into Laos. 17
8. TARGET ENVIRONMENT: The bridge is at the edge of a steep 18
and narrow Nam Mo River valley over a feeder stream, the Nam 19
Kein. The bridge site is surrounded by 3 hill masses towering 20
above the crossing at 1600 ft to 2700 ft elevation. Other 21
than the village of Khe Kien located less than .2 miles SW of 22
the bridge site, the area is sparsely populated and lightly 23
cultivated. 24
9. DEFENSE ENVIRONMENT: There are no military installations 25
in the immediate vicinity of the bridge. Work camps in the 26
area are probably provided with armed security. Six NM east 27
at the village of Ban Mou is an inactive AAA site containing 28
6 unoccupied light positions. Approximately 15 NM NW there 29
is a complex of barracks, support, administrative and support 30
buildings established for the maintenance and support of 31
Route 7. 32
10. DAMAGE OBJECTIVE: Destruction of at least one span. 33
11. EFFECT ON NVN: Interdiction of this bridge will reduce 34
cargo movement to old low level, of 300/0, apparently 35
insufficient for continued support of Communist forces in 36
central Laos. 37
12. RECUPERABILITY: Effective destruction of this modern 38
design structure would be difficult to repair over at least a 39
100 foot span distance. It is estimated that a prepared ford 40
would be installed over the old crossing during the dry season 41
within 2 to 3 days. Rainy season conditions would require at 42
the minimum a ferry operation taking over a week to place in 43
service.

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A-B-N-2

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13. COLLATERAL DAMAGE: Insignificant.

14. RECOMMENDED WEAPONS AND SORTIES:

a. In order to achieve the damage level of 85% weapons/sorties required over target:

Weapon:	250#	250#	500#	750#
	<u>SNAKEYE</u>	or <u>BOMB</u>	or <u>BOMB</u>	or <u>BOMB</u>
	80/7	340/28	166/18	135/23

b. Weapons/sorties operationally required to achieve "over target" requirements shown above:

98/8	415/34	195/23	164/28
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15. PROBABILITY OF ACHIEVING DESIRED DAMAGE CRITERION: 85%

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TARGET NO. 12.16



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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 18.15 1
2. BE NUMBER: 617-0622 2
3. IDENTIFICATION: Bai Duc Thon Highway Bridge NW
over Ngan Sau 3
4
4. DATE OF INFORMATION: 21 August 1968 5
DATE OF TISD: 18 November 1968 6
DATE OF PHOTOGRAPHY: 3 April 1965 7
DATE OF INTELLIGENCE REVIEW: 19 September 1968 8
5. LOCATION: 18-03-59N 105-49-26E; located on Route 15
approximately 30 NM N of the Laos/North Vietnam border. 9
10
6. DESCRIPTION: Oriented NW/SE with overall dimensions
of 180 x 10 feet, the bridge is a probable five-span concrete
deck type structure. A rail bridge (617-0633) (JCS 18.69) is
located 0.2 NM S of the target. One highway bridge (617-1664)
and two fords (one adjacent to 18.15) also serve as bypasses. 11
12
13
14
15
7. SIGNIFICANCE: The target lies on the recently im-
proved route 15 one of the principal access routes from the
Vinh-Ha Tinh area of North Vietnam into the Laotian Panhandle
region. 16
17
18
19
8. TARGET ENVIRONMENT: The target lies in the
approximately 2.9 NM wide Ngan Sau Valley and crosses the Ngan
Sau, a part of the Song Ca drainage system. The target area
is bordered by irregular hills with peaks up to 1500 ft. in
elevation. The valley is cultivated in the region of the
target and population is sparse. The village of Bai Duc Thon
is 1.2 NM SE of the target. 20
21
22
23
24
25
26
9. DEFENSE ENVIRONMENT: 27
 - a. Target is within the SAM envelope. 28
 - b. AAA has been identified within 3 NM of the tar-
get. 29
 - c. HMG and small arms fire is anticipated. 30
10. DAMAGE OBJECTIVE: Destruction of at least one span. 31
11. EFFECT ON NVN: Interdiction of the target would hin-
der the flow of supplies into the Lao Panhandle by way of the
Mu Gia Pass. 32
33
34
12. RECUPERABILITY: Temporary reconstruction of the
main bridge can be effected in one week, with complete
restoration possible within 4-6 weeks. Immediate bypass is
possible via a highway bridge, a rail bridge, and two high-
way fords. 35
36
37
38
39

~~SECRET~~ NO FOREIGN DISSEM EXCLUDED FROM AUTOMATIC DOWNGRADING

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13. COLLATERAL DAMAGE:

a. Insignificant 1
b. Population Casualties* 2
Target Area Adjacent Area Target Area Adjacent Area 3
Mil Civ Mil Civ Mil Civ Mil Civ 4
0 0 0 100 0 0 0 1 6
*Casualties estimated under daylight alert conditions. 7

14. RECOMMENDED WEAPONS AND SORTIES:

a. In order to achieve the desired damage criterion, 9
weapons/sorties required over target: 10
WEAPON 250# 500# 500# 750# 11
SNAKEYE SNAKEYE BOMB BOMB 12
(180' x 10) 103/9 70/8 300/33 235/39 13
b. Weapons/sorties operationally required to achieve 14
"over target" requirements shown above: 15
124/10 84/9 360/40 282/47 16

15. PROBABILITY OF ACHIEVING DESIRED DAMAGE CRITERION: 85% 17

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#18.15

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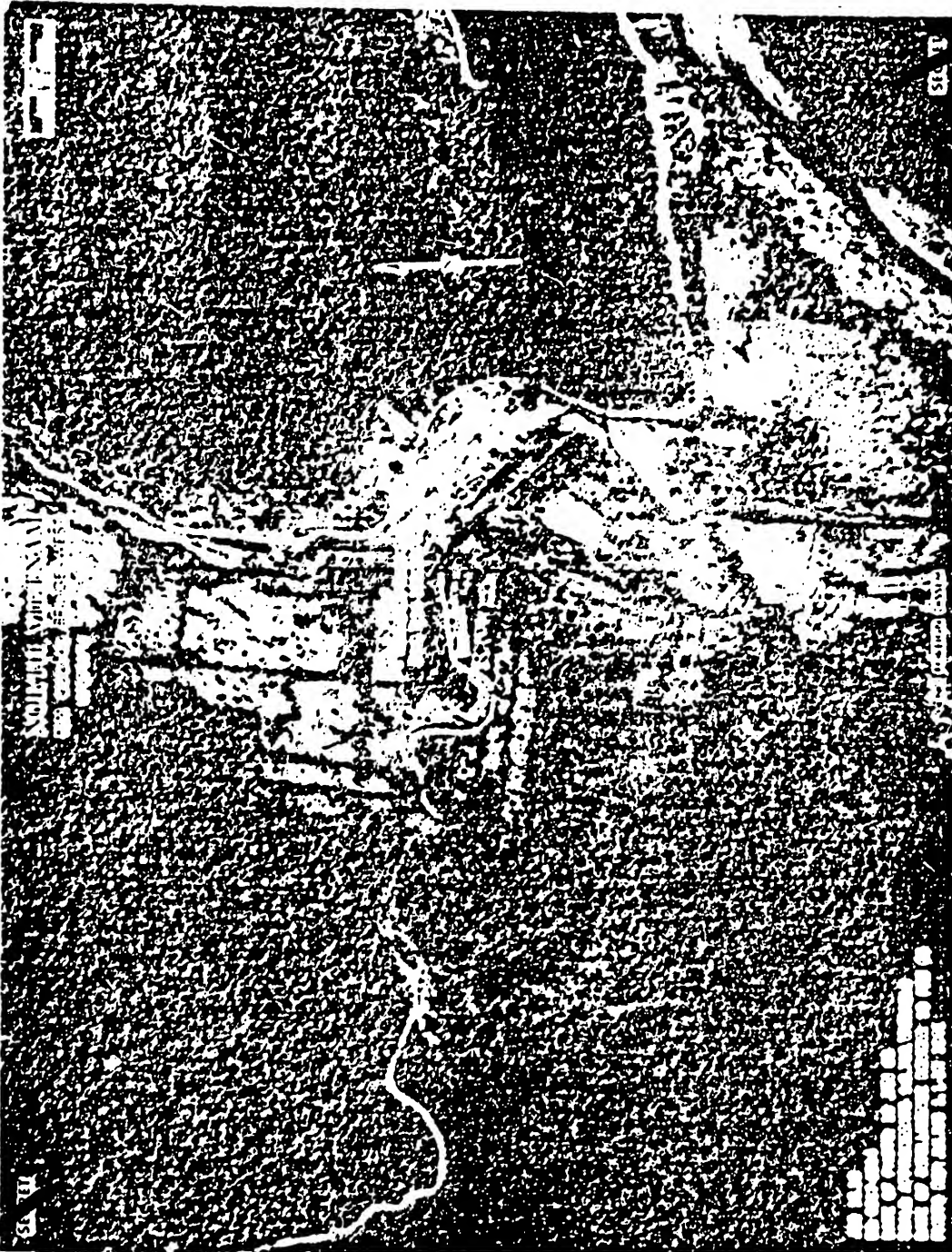
A-R-O-3

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TAB S TO ANNEX B TO APPENDIX A

TARGET NO. 18.19



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A-B-S-1

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 18.19 1
2. BE NUMBER: 0617-00514 2
3. IDENTIFICATION: Kim Cuong Highway Bridge West over Stream 3
4
4. DATE OF INFORMATION: March 1965. 5
DATE OF TIS: 13 March 1965 6
5. LOCATION: 18-26-35N/105-14-30E, UTM 48Q WF 256390. 7
Located on North Vietnam route 8 approximately 6 air miles NE 8
of the Laos border. 9
6. DESCRIPTION: Oriented E/W, the bridge has overall 10
dimensions of 130 ft x 12 ft and is a reinforced concrete deck 11
structure recently built to replace a timber bridge; number of 12
spans unknown. 13
7. SIGNIFICANCE: This structure serves traffic on Route 8 14
traveling to and from Laos via the Kao Neua Pass. Route 8 is 15
a principal alternate to Route 12. By-pass of the bridge is 16
difficult. 17
8. TARGET ENVIRONMENT: The target is situated in a 18
moderately cultivated area. It spans a ravine with overgrown 19
banks. The village of Da Mong lies just to the east of the 20
structure. Vegetative cover is moderate to heavy and off-road 21
movement is limited. The road approaches are on a new align- 22
ment with improved grade and possibly more stable crossing 23
point. 24
9. DEFENSE ENVIRONMENT: 25
 - a. There are two inactive, 4-position (14.5 mm-37mm) 26
AAA sites located approximately 1 1/2 NM southwest of the 27
target. There is also an inactive 4-position (14.5mm- 28
37mm) AAA site at Rao Cua, approximately 5 NM east-northeast 29
of the target. (DOI: KIM CUONG - 20 Feb 65; RAO CUA - 30
28 Jan 65). 31
 - b. A military area is located immediately southeast of 32
the bridge. Personnel capacity of barracks-type buildings 33
is approximately 325 men. Trenches are noted along high- 34
way 8 in the vicinity of the buildings. Probable AW posi- 35
tions are also in the area. 36
 - c. A confirmed RUS-2 early warning radar is located 37
within 15 NM of 1832N/10512E. 38
10. DAMAGE OBJECTIVE: Interdiction of traffic from the DRV 39
into Laos. Damage criterion is collapse of at least one span. 40
11. EFFECT ON DRV: Interdiction of this structure would 41
hamper movement of military traffic into Laos via the Kao 42
Neua Pass and affect the operational capability of the Commu- 43
nist forces in the Muong Phine - Sepone area. 44

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12. RECUPERABILITY: Replacement materials necessary to repair the structure to full capacity can be obtained from railway stocks in the Vinh area. Temporary repairs from local timber materials could be accomplished within 3 days.

13. COLLATERAL DAMAGE: Insignificant.

14. RECOMMENDED WEAPONS AND SORTIES:

a. In order to achieve the desired damage criterion, weapons/sorties required over target:

Weapon:	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	750# BOMB
A	190/16		590/50		250/40		310/52

b. Weapons/sorties operationally required to achieve "over target" requirements shown above:

232/20	720/61	427/49	375/53
--------	--------	--------	--------

15. PROBABILITY OF ACHIEVING DESIRED DAMAGE CRITERION: 85%

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A-B-S-3

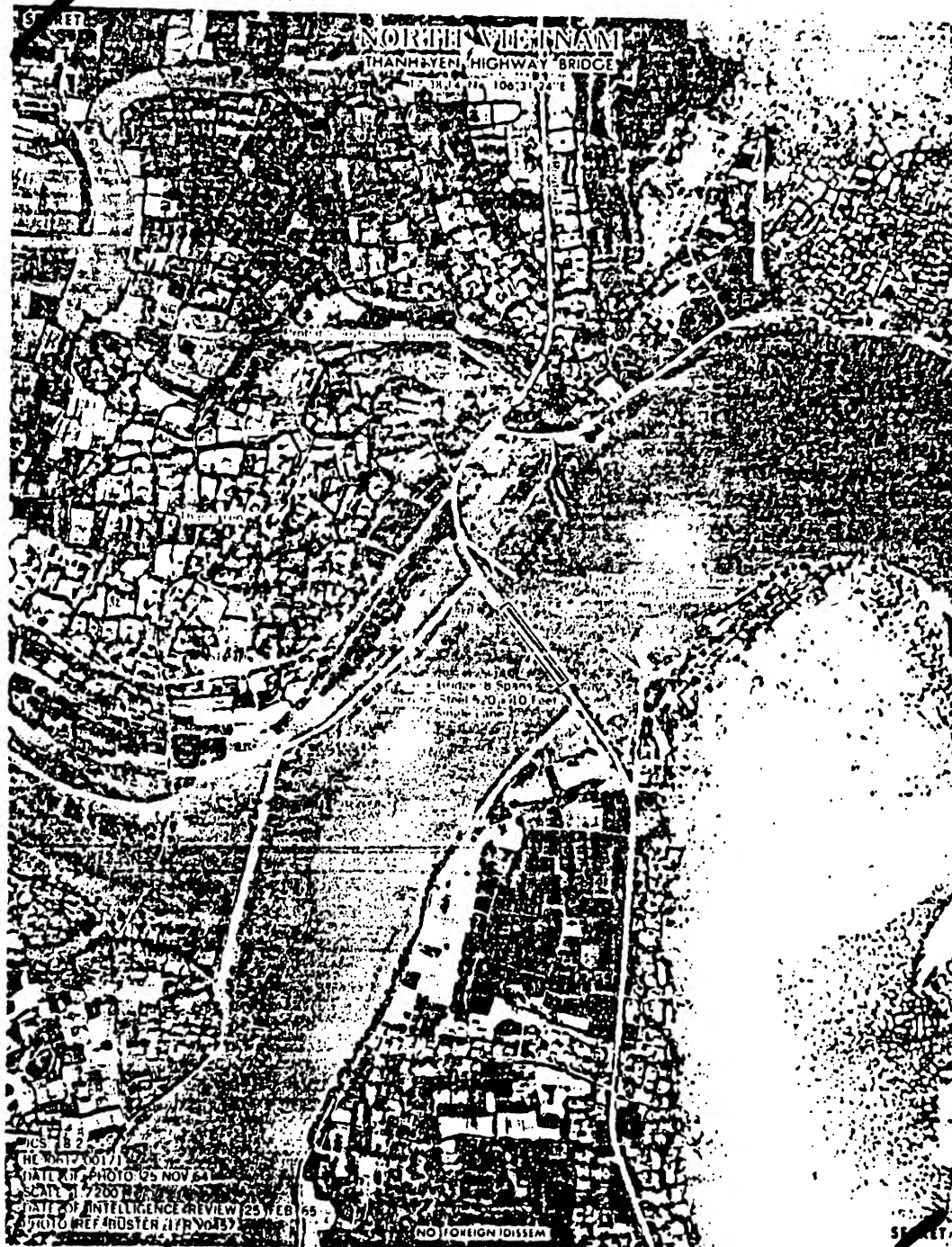
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TARGET NO. 18.2



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to Appendix A

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 18.2 1
2. BE NUMBER: 0617-00171 2
3. IDENTIFICATION: Thanh Yen Highway Bridge over Rao Da 3
4. DATE OF INFORMATION: November 1964. 4
DATE OF TIS: 5 July 1966 5
5. LOCATION: 17-48-11N/106-31-24E, UTM 48Q XE 617504, 6
located on North Vietnam Route 1A, approximately 12 miles 7
NW of Dong Hoi. 8
6. DESCRIPTION: Oriented NW/SE; 520 ft x 10 ft; 8 spans 9
reinforced concrete deck type with concrete piers; embanked 10
approach on north end and 100 ft south end. North 11
embankment also accommodates a serviceable 170 ft x 18 ft 12
ferry ramp which links with a corresponding 60 ft x 10 ft 13
sloped ramp on the south bank approximately 300 ft east of 14
the bridge. 15
7. SIGNIFICANCE: Approximately 12 miles north of Dong Hoi, 16
this bridge serves the Main Coastal Route 1A leading from the 17
Hanoi-Haiphong area into Dong Hoi. There is no alternate road 18
in the immediate vicinity. 19
8. TARGET ENVIRONMENT: Land area surrounding bridge site 20
is predominantly cultivated. Tonkin Gulf is less than 1 mile 21
to the east and stream in vicinity of bridge is subject to 22
tidal action. The Rao Da is navigable through this site and 23
native craft may be landing at spit type ferry ramps adjacent 24
to the east which appear surfaced and quite serviceable. 25
There is some concentration of dwellings on the north bank 26
nearby. 27
9. DEFENSE ENVIRONMENT: 28
 - a. No AAA sites are located in the immediate target area. 29
Nearest active AAA defenses are in the Quang Khe area, 30
approximately 4 NM northwest, where 3 sites contain a 31
total of 6 47mm or 85mm guns and 1 to 4 light (14.5mm - 32
37mm) AAA weapons. Additionally, 2 inactive sites in the 33
general Quang Khe area contain 10 unoccupied positions. 34
 - b. Phu Le (Thanh Yen) Army Barracks and Supply Depot 35
located at 17-36-50N/106-27-30E, approximately 4 NM 36
west-southwest of the target. The barracks is capable of 37
housing 1,000 troops. 38
 - c. An SO-type coastal watch radar is located in the 39
Quang Khe area. Two early warning radars, a KNIFREST-B, 40
and an SCR-270 are located at Dong Hoi, approximately 41
10 NM southeast. 42
10. DAMAGE OBJECTIVE: Interdiction of traffic between Dong 43
Hoi and the Hanoi-Haiphong area. Damage criterion is collapse 44
of at least one span. 45

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11. EFFECT ON NVN: Interdiction of this target, along with the ferry boat(s) would disrupt the flow of traffic from the Hanoi-Haiphong area into Dong Hoi. 1
2
3
12. RECUPERABILITY: The existing ferry site is apparently kept in readiness for emergency use and would very likely be used immediately upon interdiction of this bridge. River mouth stream conditions would hamper span replacement in event of loss particularly near mid stream; however, an average 65 ft gap could be repaired for limited traffic, with materials from unused rail bridge 2 miles NE, within 5-6 days. An alternate by-pass over a causeway approximately 7,000 ft SW of the bridge site may also be serviceable with minor improvement of the roadway. 4
5
6
7
8
9
10
11
12
13
13. COLLATERAL DAMAGE: 14
- a. None 15
- b. Population Casualties* 16
- | Target Area | | Adjacent Area | | Target Area | | Adjacent Area | |
|-------------|-----|---------------|-----|-------------|-----|---------------|-----|
| Mil | Civ | Mil | Civ | Mil | Civ | Mil | Civ |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
- *Casualties estimated under daylight alert conditions. 17
18
19
20
14. RECOMMENDED WEAPONS AND SORTIES: 21
- a. In order to achieve the desired damage criterion weapons/sorties required over target: 22
23
- | Weapon: | 250# | 250# | 500# | 750# |
|---------|-------------------------------|----------------------------|----------------------------|-------------|
| | <u>SNAKEYE</u> or <u>BOMB</u> | <u>BOMB</u> or <u>BOMB</u> | <u>BOMB</u> or <u>BOMB</u> | <u>BOMB</u> |
| | 55/5 | 210/18 | 130/14 | 120/20 |
- b. Weapons/sorties operationally required to achieve "over target" requirements shown above: 24
25
26
- | | | | |
|------|--------|--------|--------|
| 67/6 | 256/22 | 155/17 | 146/24 |
|------|--------|--------|--------|
- 27
28
15. PROBABILITY OF ACHIEVING DESIRED DAMAGE CRITERIA: 85% 28

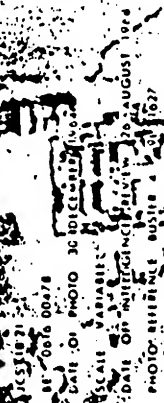
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(Revised by 9th Note to Holders)

TARGET NO. 18.21



revised by 15th H/H)

A-B-U-1

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TARGET INFORMATION AND STRIKE DATA

1. **TARGET NUMBER:** 18-21 1
2. **B.E. NUMBER:** 616-0178 2
3. **IDENTIFICATION:** Phu Ly Railroad Bridge over Song Lap 3
4. **DATE OF INFORMATION:** 30 June 1968 4
5. **DATE OF TIS:** 4 November 1968 5
6. **DATE OF PHOTOGRAPHY:** 30 December 1964 6
7. **DATE OF INTELLIGENCE REVIEW:** 26 August 1968 7
8. **LOCATION:** 20-32-50N 105-55-15E. Located on the Ha Noi-Vinh rail line about 30 NM S of Ha Noi and just N of the minor port of Phu Ly. 8
9
10
9. **DESCRIPTION:** Bridge, oriented NNE/SSW, is 240' long and 8' wide. It has 4 steel spans. A single bypass rail bridge (616-3725) is located a short distance to the WNW. 11
12
10. **SIGNIFICANCE:** A vital link on the important rail line connecting Ha Noi with Thanh Hoa and Vinh, the most southern station in the North Vietnam rail system. 13
14
15
11. **TARGET ENVIRONMENT:** Target, about 10' above sea level, is across the WNW flowing Song Lap, from N edge of Phu Ly (town), and 0.5 NM NE of the junction of the Song Lap and the SE flowing Song Day rivers. A S flowing canalized stream joins the Song Lap 0.3 NM W of target. Target is on a broad, flat, rice-cultivated plain which extends 2.4 NM SW of target to rugged, forested NNW-SSE trending hills. In all other directions, the plain extends for more than 10 NM from target. A small group of low, grassy hills is located about 5 NM E of the target. For about 0.5 NM E and W and 1.0 NM N of target much of the land is inundated. Culture features are dense within about 2.0 NM of target. 16
17
18
19
20
21
22
23
24
25
12. **DEFENSE ENVIRONMENT:** 26
 - a. The target is within the SAM envelope. 27
 - b. AAA activity has been identified within 3 NM of the target. 28
 - c. IIMO and small arms fire is anticipated. 29
13. **DAMAGE OBJECTIVE:** Interdiction of traffic from Ha Noi S to Thanh Hoa and Vinh. Damage criterion is collapse of at least one span. 30
31
32
14. **EFFECT ON NVN:** Destruction of this bridge would halt rail traffic through this point on the line S from Ha Noi, and place a heavy burden on local highway routes, should a shuttle bypass be attempted. 33
34
35
36

~~SECRET~~ NO FOREIGN DISSEM EXCLUDED FROM AUTOMATIC DOWNGRADING

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12. RECOVERABILITY:

- a. Line capacity: 9 Trains/3500 ST each way per day.
- b. Emergency facility: Existing circuitous highway routing would permit full throughput capacity after 3 days.
- c. Bridge reconstruction: Emergency restoration would permit full capacity after 2 weeks. Complete restoration to pre-attack status would require 2-4 months.

13. COLLATERAL DAMAGE:

- a. Light damage to surrounding area.
- b. Population Casualties*

Target Area		Adjacent Area		Target Area		Adjacent Area	
Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ
0	0	0	160	0	0	0	2

* Estimated under daylight alert conditions.

14. RECOMMENDED WEAPONS AND SORTIES:

- a. In order to achieve the desired damage criterion weapons/sorties required over target:

WEAPON	250#	500#	500#	750#
	SNAKEYE	or SNAKEYE	or BOMB	or BOMB
(40 x 8)	86/7	61/7	260/29	214/36

- b. Weapons/sorties operationally required to achieve "over target" requirement shown above:

104/9	74/8	312/35	257/43
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15. PROBABILITY OF ACHIEVING DESIRED DAMAGE CRITERION: 85%

#18.21

A-11-U-3

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TARGET NO. 14.22

SECRET

NORTH VIETNAM

CO TRAI RAILROAD BRIDGE OVER CANAL

20 41 40 N. 105 54 55 E

CO TRAI HIGHWAY BRIDGE OVER CANAL

20 41 40 N. 105 54 54 E

1. JCS 18.22
- A. RAILROAD BRIDGE (0616.00064) 190' x 16' - 3 SPANS
- B. HIGHWAY BRIDGE (0616.03729) 150' x 30' - SINGLE SPAN
2. SONG-LOP CANAL
3. AAA. A POSITION -

JCS 18.22
 0616.00064
 0616.03729
 DATE OF INFO. 1 SEPTEMBER 1961
 SCALE 1:50,000
 DATE OF CURRENT REVIEW 2 AUGUST 1965
 PHOTO REFERENCE 65 8090 111

NO FOREIGN DISSEM

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A-B-V-1

Tab V to Annex B to Appendix A

Reviewed by JCS N/H

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TARGET INFORMATION AND STRIKE DATA

1. **TARGET NUMBER:** 18.22

2. **B. E. NUMBER:** 616-0664 - Co Trai Railroad Bridge Over Canal
616-3729 - Co Trai Highway Bridge Over Canal

3. **IDENTIFICATION:** Co Trai Railway and Highway Bridges

4. **DATE OF INFORMATION:** 31 July 1968

DATE OF TJSID: 6 November 1968

DATE OF PHOTOGRAPHY: 4 September 1965

DATE OF INTELLIGENCE REVIEW: 27 August 1968

5. **LOCATION:** Railway bridge - 20-41-40N 105-54-55E

Highway bridge - 20-41-40N 105-54-54E

Located on the Ha Noi-Vinh rail line and on National Route 1A, about 24 NM S of Ha Noi.

6. **DESCRIPTION:** A pair of parallel bridges, oriented N/S.

a. The eastern railway bridge is 190' long and 16' wide. It has a 120' center through-truss span, two steel beam spans, two concrete piers, and concrete abutments. There are two bypass rail bridges (616-4346 and 616-4347).

b. The western highway bridge is 150' long and 30' wide with a single span and concrete deck. There are three highway bypass ferries (616-4531, 616-4532, and 616-4533).

7. **SIGNIFICANCE:** The targets are located on the Ha Noi-Vinh rail line and National Route 1A, between Ha Noi and the minor port of Phu Ly. There is an alternate longer (10NM) highway route of lower capacity from Ha Noi to Phu Ly.

8. **TARGET ENVIRONMENT:** The 2 bridges, about 10 feet above sea level, are 0.4 NM SW of Co Trai, 0.1 NM W of Bai Le and 3.3 NM WSW of S/E flowing Red River. Targets are on a broad, flat plain cultivated in wetland rice. The plain contains many streams, canals, and ditches. Vegetation consists almost entirely of cultivation, with trees confined to the compact scattered villages. The road and railroad are on an embankment and the canal they cross is bordered by dikes. Vehicular movement off the highway is restricted; there are many trails and tracks for foot traffic and local vehicular movement. A distinctive 120° bend in the stream is located 1.2 NM SSE of the target.

9. **DEFENSE ENVIRONMENT:**

a. The target is within the SAM envelope.

b. AAA activity has been identified within 3NM of the target.

c. HMG and small arms fire is anticipated.

10. **DAMAGE OBJECTIVE:** Interdiction of rail and highway traffic between Ha Noi and Phu Ly. Damage criterion is collapse of the center railway span and the single highway span.

11. **EFFECT ON NVN:** Destruction of these bridges would halt traffic S from Ha Noi to Phu Ly, Thanh Hoa, and Vinh, except for a lower-capacity, alternate highway route.

~~SECRET~~ NO FOREIGN DISSEM EXCLUDED FROM AUTOMATIC DOWNGRADING

(Revised by 15th Note to Holders)

A-R-V-2

TAB v to
Annex B to
Appendix A

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SECRET

12. RECUPERABILITY:**a. Rail:**

(1) Line capacity: 9 Trains/3500 ST each way per day.

(2) Emergency facility: Highway shuttle via ferry or pontoon bridge would provide throughput capacity of 1500 ST/Day after 5 days or full capacity after about 7 days.

(3) Bridge reconstruction: Emergency bridge restoration would permit full capacity after 3 weeks. Complete restoration to pre-strike would require 3-6 months.

b. Highway: Traffic might be restored within 10 days with the construction of one or more intermediate piers and salvaging of structural members from the rail bridge. Complete restoration to pre-strike status would require 7-8 weeks.

13. COLLATERAL DAMAGE:**a. Insignificant****b. Population****Casualties***

Target Area		Adjacent Area		Target Area		Adjacent Area	
Mil.	Civ.	Mil.	Civ.	Mil.	Civ.	Mil.	Civ.
0	0	0	70	0	0	0	1

Casualties estimated under daylight alert conditions.

14. RECOMMENDED WEAPONS AND SORTIES:

a. In order to achieve the desired damage criterion, weapons/sorties required over target:

WEAPON	250#	or	500#	or	500#	or	750#
	SNAKEYE		SNAKEYE		BOMB		BOMB
Area A (190' x 16')	238/20		104/12		445/49		226/38
Area B (150' x 30')	103/9		60/7		258/29		168/28
Total:	241/29		164/19		703/78		394/66

b. Weapons/Sorties operationally required to achieve "over target" requirements shown above:

	410/34		197/22		844/93		474/79
--	--------	--	--------	--	--------	--	--------

15. PROBABILITY OF ACHIEVING DESIRED DAMAGE CRITERION: 85%

SECRET

#18.22

(Revised by 15th Note to Holdbra)

A-R-V-3

TAB v to
Annex B to
Appendix A

139

TARGET NO. 18123

TARGET NO. 18123

NORTH VIETNAM

BAO GIANG RAILROAD AND HIGHWAY BRIDGE OVER SONG THUONG

1. ICS 18123

2. RAILROAD AND HIGHWAY BRIDGE OVER SONG THUONG

3. SONG THUONG

4. AAA & POSITIVE



ICS: 18123

SP: 0616-0012

DATE OF PHOTO: 9 MARCH 1963

SCALE: 1:4000 (APPROX)

DATE OF INTERPRETATION: 20 SEPTEMBER 1963

PHOTO REFERENCE: AS SHOWN ON MAP

NO FOREIGN DISSEM

SECRET

Classified by 15th N/H

A-B-W-1

TARGET INFORMATION AND STRIKE DATA

1. **TARGET NUMBER:** 18.23 1
2. **B. E. NUMBER:** 616-0479 2
3. **IDENTIFICATION:** Bac Giang Railroad and Highway Bridge over Song Thuong 3
4. **DATE OF INFORMATION:** 26 July 1968 4
DATE OF TISD: 5 November 1968 5
DATE OF PHOTOGRAPHY: 3 March 1966 6
DATE OF INTELLIGENCE REVIEW: 16 September 1968 7
5. **LOCATION:** 21-16-28N 106-11-24E, located on the Ha Noi-Dong Dang rail line and Route 1A, 24 NM NE of Ha Noi. 8
9
6. **DESCRIPTION:** Bridge, oriented NE/SW, is 430' long and 25' wide. It has steel half-through-truss spans, 3 concrete piers, and concrete abutments. It has rail bypass bridges (616-2362 and 616-4458), 2 highway bypass bridges (616-3704 and 616-3705) and 2 highway ferries (616-3703 and 616-3706). 10
11
12
13
7. **SIGNIFICANCE:** This bridge is a vital link on the principal rail line connecting Ha Noi with Communist China. However, because it is located on the dual-gauge Kep-Vien portion of the line, there is a longer, standard-gauge-only alternate route from Kep to Yen Vien) via Thai Nguyen and Kinh No. 14
15
16
17
8. **TARGET ENVIRONMENT:** Target, about 10 feet above sea level, crosses flowing Song Thuong at NW corner of Bac Giang. Target is on broad, flat plains activated in wetland rice. Numerous small hill areas are located NW of the target, nearest being about 2 NM NW. The road and railroad, generally embanked, extend NE to Phu Xuyen and W for 3 NM before turning to the SW. An E flowing, canalized stream joins the Song Thuong about 0.1 NM N of the W end of target. 18
19
20
21
22
23
9. **DEFENSE ENVIRONMENT:** 24
 - a. The target is within the SAM envelope. 25
 - b. AAA activity has been identified within 3 NM of the target. 26
 - c. HMG and small arms fire is anticipated. 27
10. **DAMAGE OBJECTIVE:** Interdiction of rail traffic between Kep and Yen Vien on the direct, dual-gauge portion of the Ha Noi-Dong Dang rail line. Damage criterion is the collapse of at least one span. 28
29
30
11. **EFFECT ON NVN:** Destruction of this bridge would prevent through rail traffic to Ha Noi and require standard gauge trains to be routed over the longer (NM) Thai Nguyen-Kinh No alternate route. 31
32
33
12. **RECUPERABILITY:** 34
 - a. Rail: 35
 - (1) Line capacity: 9 Trains/6000 ST each way per day. 36
 - (2) Emergency facility: Emergency ferry and/or pontoon bridge would permit 1000 to 2000 ST/Day highway shuttle after 7 days. 37
38
 - (3) Bridge reconstruction: Emergency bridge restoration to full capacity would require 1-3 weeks. Complete restoration to pre-attack status would require 3 months. 39
40
41

NO FOREIGN DISSEM EXCLUDED FROM AUTOMATIC DOWNGRADING
 (Revised by 15th Note to Holders)

A-B-W-2

TAB W to
 Annex B to
 Appendix A

~~SECRET~~

b. Highway: Vehicular traffic could be restored within a matter of days following restoration for rail traffic by decking along the rails.

13. COLLATERAL DAMAGE:

a. Insignificant

b. Population

Casualties*

Target Area		Adjacent Area		Target Area		Adjacent Area	
Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ
0	10	0	180	0	0	0	2

Casualties estimated under daylight alert conditions.

14. RECOMMENDED WEAPONS AND SORTIES:

a. In order to achieve the desired damage criterion, weapons/sorties required over target:

WEAPON:	250#	500#	500#	750#	
	SNAKEYE	or	SNAKEYE	or	BOMB
(430' x 25')	1270/106	258/29	1041/116	167/28	

b. Weapons/Sorties operationally required to achieve "over target" requirement shown above:

1524/127	310/34	1250/139	201/34
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15. PROBABILITY OF ACHIEVING DESIRED DAMAGE CRITERION: 85%

~~SECRET~~

#18.23

(Revised by 15th Note to Holdern)

A-H-W-3

TAB W to
Annex B to
Appendix A

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TAB X TO ANNEX B TO APPENDIX A

NORTH VIETNAM

CAO NUNG RAILROAD BRIDGE OVER SONG HOA

71 01 25 05 100 00 00 00



ICSI 18 2
REF: 0616 00707
DATE OF PHOTO: 28 APRIL 1965
SCALE: 1:4700 (APPROX)
DATE OF INTELLIGENCE REVIEW: 27 AUGUST 1968
PHOTO REFERENCE: GENE (M) REF 1083

APPROXIMATE SCALE IN FEET
500 1000

NO FOREIGN DISSEM

~~SECRET~~

~~SECRET~~

Revised by 15 th N/H)

A-B-X-1

Tab X to Annex B to Appendix A
17 April 1965

~~SECRET~~

TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 18.24 1
2. B.E. NUMBER: 616-0707 2
3. IDENTIFICATION: Cao Nung Railway Bridge over Song Hoa 3
4. DATE OF INFORMATION: 26 July 1968 4
5. DATE OF TISD: 5 November 1968 5
6. DATE OF PHOTOGRAPHY: 28 April 1965 6
7. DATE OF INTELLIGENCE REVIEW: 27 August 1968 7
8. LOCATION: 21-33-25N 106-29-55E, located on the Ha Noi-Dong 8
Dang rail line, 62 NM miles N of Ha Noi and 21 NM miles N of Kep. 9
9. DESCRIPTION: Bridge, oriented NE/SW, is 202' long and 13' 10
wide. It is a 5 span steel and concrete bridge. It has one rail 11
bypass bridge (616-2128), completed in 1966. 12
10. SIGNIFICANCE: This bridge is a key link on the dual gauge 13
rail line connecting Communist China, at P'ing-hsiang, with the Ha Noi 14
area. The only alternate railroad routing is hundreds of miles longer 15
through China, via Kuei-yang and Kun-ming, entering North Vietnam at 16
Lao Cai. From Kep, about 21 NM miles farther S, there are 2 possible 17
rail routes to the Ha Noi area. 18
11. TARGET ENVIRONMENT: Target, about 130 ft. above sea level, 19
located 24 NM NE of Bac Giang, at confluence of SW/NE trending Song 20
Thuong (stream) with NW/SE trending Song Hoa (stream). Target is across 21
Song Hoa, about 300 yds SE of confluence. Target area is a rough, 22
rolling plain, with partially wooded hill summits less than 250 ft. 23
above sea level, interrupted by S bank tributaries of Song Thuong 24
and rice-cultivated valleys. N and NE of target area, beyond Song 25
Thuong, are rugged, wooded hills 700 - 2,000 ft. above sea level, 26
interrupted by small cultivated valleys. A principal road along N 27
bank of Song Thuong, passes 0.7 NM N of target site. Railroad 28
approaches target bridge from SW along S bank of Song Thuong and 29
continues to NE. 30
12. DEFENSE ENVIRONMENT: 31
13. a. The target is within the SAM envelope. 32
14. b. AAA activity has been identified within 3 NM of the target. 33
15. c. IIMO and small arms fire is anticipated. 34
16. DAMAGE OBJECTIVE: Interdiction of the principal rail 35
connection between Communist China and Ha Noi. Damage criterion 36
is the collapse of at least one span. 37
17. EFFECT ON NVN: Destruction of this bridge would halt rail 38
traffic between Communist China and North Vietnam, except for the 39
long alternate route through China to Lao Cai. 40

~~SECRET~~ NO FOREIGN DISSEM EXCLUDED FROM AUTOMATIC DOWNGRADING

A-11-X-2

(Revised by 15th Note to Holders)

TABX to
Annex H to
Appendix A

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12. RECUPERABILITY:

- a. Line capacity: 9 Trains each way per day; 6000 ST southward and 5200 ST northward daily.
- b. Emergency facility: Highway shuttle over a ferry would permit about 400 ST/Day after 1-3 days.
- c. Bridge reconstruction: Emergency restoration to full capacity would require about 1-2 weeks. Complete restoration to pre-attack status would require 2-4 months.

13. COLLATERAL DAMAGE: None

14. RECOMMENDED WEAPONS AND SORTIES:

- a. In order to achieve the desired damage criterion, weapons/sorties required over target:

WEAPON	250#	500#	500#	750#
	SNAKEYE or	SNAKEYE or	BOMB or	BOMB
(190 x 13)	241/20	107/12	460/51	243/41

- b. Weapons/sorties operationally required to achieve "over target" requirement shown above:

290/24	129/14	552/61	292/49
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15. PROBABILITY OF ACHIEVING DESIRED DAMAGE CRITERION: 85%

~~SECRET~~

A-N-X-3

(Revised by 15th Note to Holders)

#18.24

TAN X to
Annex B to
Appendix A

~~SECRET~~

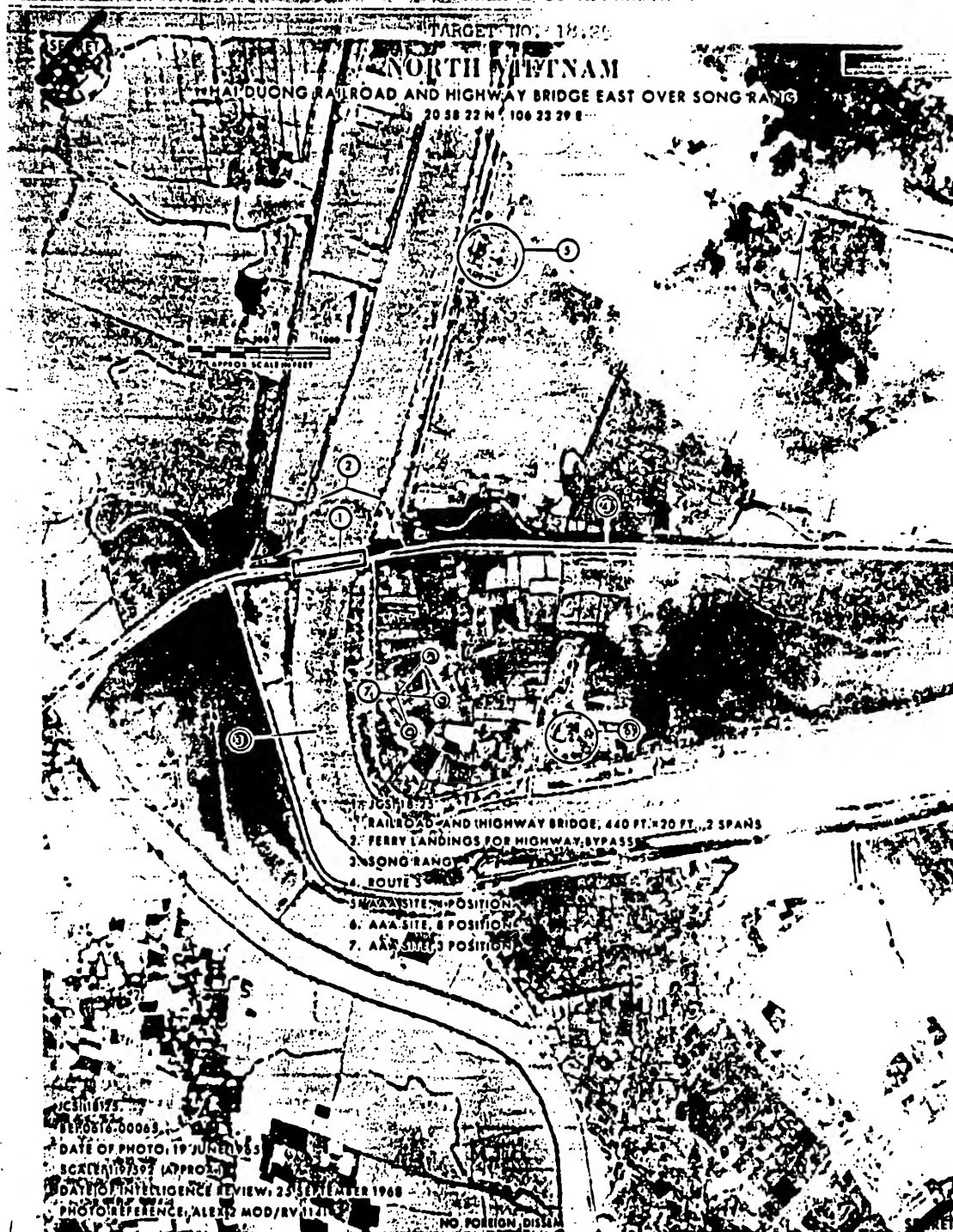
TAB Y TO ANNEX B TO APPENDIX A

TARGET NO. 18.26

~~SECRET~~
NORTH VIETNAM

THAI DUONG RAILROAD AND HIGHWAY BRIDGE EAST OVER SONG RANG

20 58 22 N 106 23 29 E



~~SECRET~~

Revised by 15th N/H

A-R-Y-1

TAB Y TO ANNEX B TO APPENDIX A

~~SECRET~~

TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 18.25 1
2. B.E. NUMBER: 616-0065 2
3. IDENTIFICATION: Hai Duong Railroad and Highway Bridge East Over Song Rang. 3
4
4. DATE OF INFORMATION: 11 August 1968 5
DATE OF TISD: 6 November 1968 6
DATE OF PHOTOGRAPHY: 19 June 1965 7
DATE OF INTELLIGENCE REVIEW: 25 September 1968 8
5. LOCATION: 20-58-22N 106-23-29E, located on the Ha Noi-Hai Phong rail line and National Route 5 about 21 NM miles W of Hai Phong. 9
10
11
6. DESCRIPTION: Bridge, oriented ENE/WSW, is 440' long and 20' wide. It has 2 steel through-truss spans, a concrete center pier, 6 additional wooden intermediate piers, and concrete abutments. There are 2 rail bypass bridges (616-2224 and 616-2447) and 3 highway bypasses - 2 ferries (616-3699 and 616-3700) and one pontoon bridge (616-3897). 12
13
14
15
16
17
7. SIGNIFICANCE: This bridge is a key link on the vital rail line and primary highway connecting Ha Noi and the port of Hai Phong. Highway detours are possible via routes running S of Hai Duong and Route 5. 18
19
20
21
8. TARGET ENVIRONMENT: Target, 10 feet above sea level, is located 3.8 NM NE of Hai Duong. Broad, flat plains cultivated in wetland rice extend for more than 10 NM in all directions from target. Many small compact villages are scattered over the plains; the settlement nearest target is 0.3 NM to the SW. Road and railroad, built on an embankment, extend generally NE and SW from target; at the village nearest target, the road and railroad cross a NW-SE oriented canal. The Song Rang, flowing S at the target, changes to an ENE course 0.2 NM from the target. 22
23
24
25
26
27
28
29
30
9. DEFENSE ENVIRONMENT: 31
 - a. The target is within the SAM envelope. 32
 - b. AAA activity has been identified within 3 NM of the target. 33
 - c. HMO and small arms fire is anticipated. 34
10. DAMAGE OBJECTIVE: Interdiction of traffic between Hai Phong and Ha Noi. Damage criterion is collapse of at least one span. 35
36
11. EFFECT ON NVN: Destruction of this bridge would halt rail traffic and cause extensive rerouting of highway traffic. Destruction of all facilities here would seriously hamper distribution of vital import traffic from Hai Phong. 37
38
39
40

~~SECRET~~ NO FOREIGN DISSEM EXCLUDED FROM AUTOMATIC DOWNGRADING

(Revised by 15th Note to Holders)

A-B-Y-2

TAB Y to
Annex H to
Appendix A

~~SECRET~~

12. RECUPERABILITY:

a. Rail:

- (1) Line Capacity: 9 trains/4600 ST each way per day.
- (2) Emergency Facility: The 2 rail bypass bridges are under construction and materials needed for completion are nearby.
- (3) Bridge construction: Emergency bridge restoration, permitting full capacity, would require 4-5 weeks; complete restoration to pre-attack status would require 4-6 months.

b. Highway: An active ferry facility (616-3700) is available just N of the bridge. This bypass, supplemented by re-routing to the S, should be able to accommodate critical highway transport requirements.

13. COLLATERAL DAMAGE:

a. Insignificant

b. Population

Casualties*

Target Area		Adjacent Area		Target Area		Adjacent Area	
Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ
0	0	0	50	0	0	0	1

*Casualties estimated under daylight alert conditions.

14. RECOMMENDED WEAPONS AND SORTIES:

a. In order to achieve the desired damage criterion, weapons/sorties required over target:

WEAPON	250# SNAKEYE	500# SNAKEYE	500# BOMB	750# BOMB
(140 x 20)	130/11	56/6	227/25	111/19

b. Weapons/sorties operationally required to achieve "over target" requirement shown above:

156/13	68/8	273/30	134/22
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15. PROBABILITY OF ACHIEVING DESIRED DAMAGE CRITERION: 85%

~~SECRET~~

#18.25

(Revised by 15th Note to Holders)

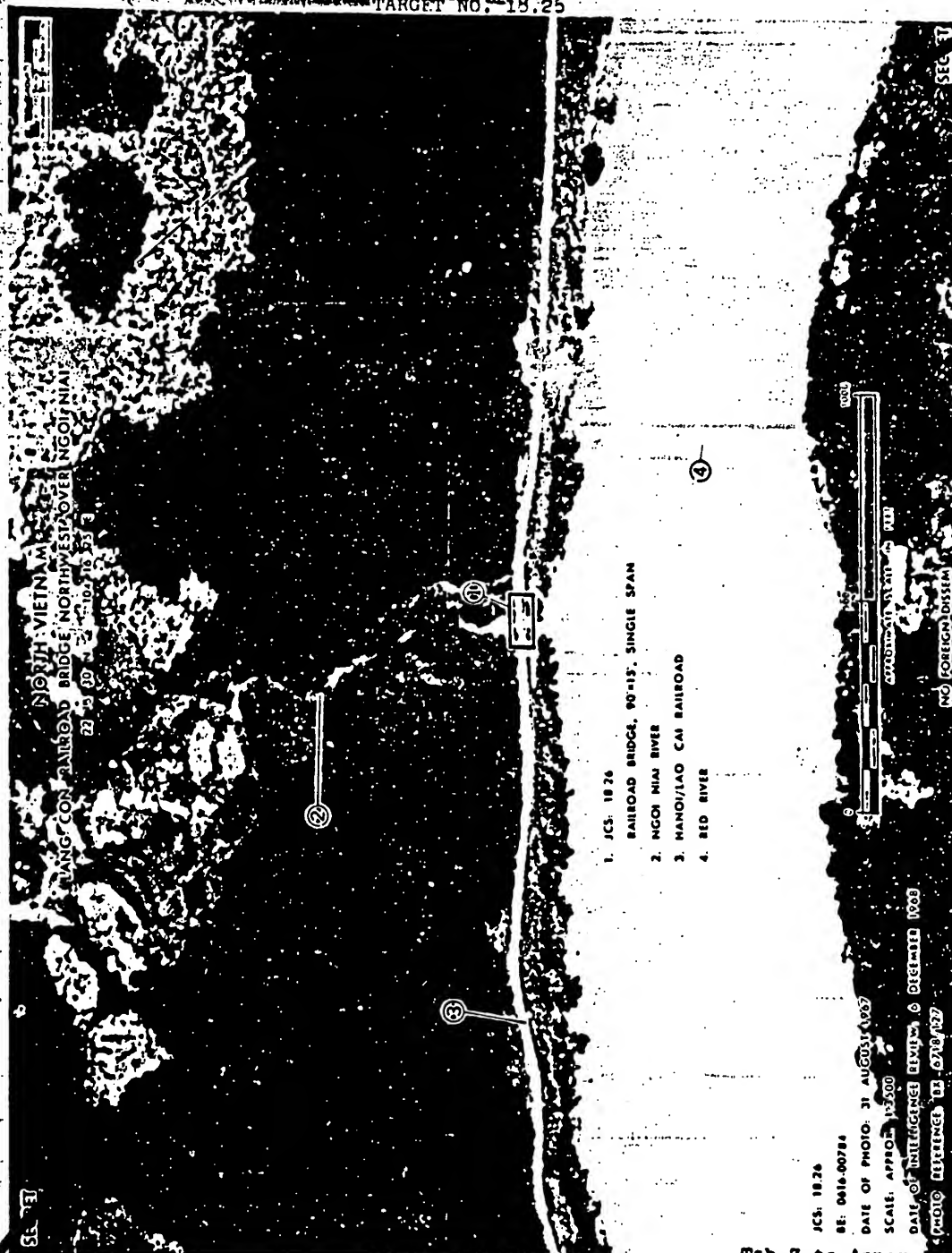
A-N-Y-3

TAB Y to
Annex I to
Appendix A

SECRET

TAB Z TO ANNEX B TO APPENDIX A

TARGET NO. 18.26



(Revised by 16th N/H)

Tab Z to Annex
to Appendix A

~~SECRET~~

TARGET INFORMATION AND STRIKE DATA

1. **TARGET NUMBER:** 18.28 1
2. **B. E. NUMBER:** 616-0784 2
3. **IDENTIFICATION:** Lang Con Railroad Bridge Northwest over Ngoi Nlat. 3
4. **DATE OF INFORMATION:** 26 July 1968 4
- DATE OF TISD:** 23 January 1969 5
- DATE OF PHOTOGRAPHY:** 31 August 1967 6
- DATE OF INTELLIGENCE REVIEW:** 6 December 1968 7
5. **LOCATION:** 22-15-30N 104-16-25E, located 24 NM SE of the Communist China border on the Ha Noi-Lao Cai rail line. 8
6. **DESCRIPTION:** Bridge, oriented NW/SE, is 90' long and 15' wide and has a single steel half-through-truss span. It has no bypass. 10
7. **SIGNIFICANCE:** This bridge is located on the less-important of North Vietnam's 2 rail connections with Communist China. This line is also used to move apatite S toward Ha Noi from mines located just S of Lao Cai. 12
8. **TARGET ENVIRONMENT:** Target is about 250' above sea level, 22 NM SE of Lao Cai in the valley of the Red River. It is across the Ngoi Nlat, a SW flowing tributary of the Red River. Target is about 125' NE of the Red River. 16
- Densely forested hills and mountains rising to over 1500' extend close along both sides of the river. Small flat areas of the valley are cultivated with rice. 18
- The railroad extends along the NE side of the Red River. 20
9. **DEFENSE ENVIRONMENT:** 21
 - a. The target is not within the SAM envelope. 22
 - b. AAA activity has not been identified within 3 NM of the target. 23
 - c. HMG and small arms fire is not anticipated. 24
10. **DAMAGE OBJECTIVE:** Interdiction of rail traffic between Yunnan Province, China and Ha Noi, via Lao Cai. Damage criterion is collapse of the span. 25
11. **EFFECT ON NVN:** Destruction of this bridge would halt rail traffic on the alternate rail connection between Communist China and Ha Noi. It would also halt southward movement of apatite from the mines just S of Lao Cai. 27
12. **RECUPERABILITY:** 30
 - a. Line capacity: 12 Trains/3700 ST each way per day. 31
 - b. Bridge Reconstruction: Emergency restoration to full capacity would require 1 to 2 weeks. Complete restoration to pre-attack status would require 2 to 3 months. 32

~~SECRET~~ NO FOREIGN DISSEM EXCLUDED FROM AUTOMATIC DOWNGRADING

(Revised by 16th Note to Holders)

Tab Z to
Annex B to
Appendix A

~~SECRET~~

13. COLLATERAL DAMAGE:

a. None

b. Population Casualties*

Target Area Adjacent Area Target Area Adjacent Area

Mil Civ Mil Civ Mil Civ Mil Civ

0 0 0 20 0 0 0 0

*Casualties estimated under daylight alert conditions.

14. RECOMMENDED WEAPONS AND SORTIES:

a. In order to achieve the desired damage criterion weapons/sorties required over target:

WEAPON	250#	500#	500#	750#
(90' x 15')	479/40	211/28	912/101	468/78

b. Weapons/sorties operationally required to achieve "over target:" requirement shown above:

525/48	254/28	1095/122	563/94
--------	--------	----------	--------

15. PROBABILITY OF ACHIEVING DESIRED DAMAGE CRITERION: 85%

~~SECRET~~

A-R-7-3

(Revised by 16th Note to Holders)

Tab Z to
Annex B to
Appendix A

TARGET NO. 15.



~~Excluded by Item 8/11)~~

~~SECRET~~

TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 18.27 1
2. B. E. NUMBER: 616-0783 2
3. IDENTIFICATION: Lang Bun Railroad Bridge over Ngoi Bon 3
4. DATE OF INFORMATION: 26 July 1968 4
- DATE OF TISD: 5 November 1968 5
- DATE OF PHOTOGRAPHY: 14 July 1965 6
- DATE OF INTELLIGENCE REVIEW: 27 August 1968 7
5. LOCATION: 22-09-00N 104-23-23E, located on the Ha Noi-Lao Cai rail line, 33 NM S of the Chinese border. 8
9
6. DESCRIPTION: Bridge, oriented NW/SE, is 155' long and 15' wide. It has 2 steel through-truss spans. There is one rail bypass bridge (616-3624). 10
11
7. SIGNIFICANCE: This bridge is located on the second and less-important of North Vietnam's 2 rail connections with Communist China. This line is also used to move apatite S toward Ha Noi from mines located just S of Lao Cai. 12
13
14
8. TARGET ENVIRONMENT: Target, about 270 feet above sea level, is located 15
38 NM NW of Yen Bay (town) in the valley of the SE-flowing Red River. It is 16
across a small tributary of, and 0.5 NM NE from, the Red River. Target is in 17
rugged, forest-covered hills and mountains. Elevations rise to 1273 feet 0.7 18
nautical miles to the N, 1745 feet 1.02 NM to the E, 3820 feet 2.8 nautical miles 19
to the ENE, and 1676 feet 1.8 NM to the SE. To the SW, between the target and 20
the Red River, are brush-covered low hills and rice-cultivated valleys. West of 21
the Red River are brush and forest covered hills and mountains. The Red River 22
makes a double horseshoe turn centered about 2 nautical miles NW of the target. 23
The rail line extends NW and SE from the target. 24
9. DEFENSE ENVIRONMENT: 25
 - a. The target is within the SAM envelope. 26
 - b. AAA activity has been identified within 3 NM of the target. 27
 - c. HMG and small arms fire is anticipated. 28
10. DAMAGE OBJECTIVE: Interdiction of rail traffic between Communist 29
China and Ha Noi via Lao Cai. Damage criterion is the collapse of at least 1 30
span. 31
11. EFFECT ON NVN: Destruction of this bridge would halt rail traffic on 32
the alternate route between Communist China and Ha Noi. It would also halt 33
southward movement of apatite from the mines just S of Lao Cai. 34
12. RECUPERABILITY: 35
 - a. Line capacity: 12 Trains/3700 ST each way per day. 36
 - b. Emergency facility: Highway shuttle via a pontoon bridge or by 37
fording the stream would permit about 1700 ST/Day after 7 days. 38
 - c. Bridge reconstruction: Emergency bridge restoration would permit 39
full capacity within 2-4 weeks. Complete restoration to pre-attack status would 40
require 2-4 months. 41

~~SECRET~~ NO FOREIGN DISSEM EXCLUDED FROM AUTOMATIC DOWNGRADING

(Revised by 15th Note to Holders).

A-B-AA-2

TAB AAtO
Annex B to
Appendix A

~~SECRET~~

13. COLLATERAL DAMAGE:

a. Insignificant.

b. Population

Casualties*

Target Area Adjacent Area Target Area Adjacent Area

Mil Civ Mil Civ Mil Civ Mil Civ

0 0 0 80 0 0 0 1

*Casualties estimated under daylight alert conditions.

14. RECOMMENDED WEAPONS AND SORTIES:

a. In order to achieve the desired damage criterion, weapons/sorties required over target:

WEAPON	250#	500#	500#	750#
	<u>SNAKEYE</u>	or <u>SNAKEYE</u>	or <u>BOMB</u>	or <u>BOMB</u>
55' x 15'	286/24	126/14	541/60	278/46

b. Weapons/Sorties operationally required to achieve "over target" requirement shown above:

344/29	152/17	650/72	334/56
--------	--------	--------	--------

15. PROBABILITY OF ACHIEVING DESIRED DAMAGE CRITERION: 85%

~~SECRET~~

2

#18.27

(Revised by 15th Note to Holders)

A-B-AA-3

TABAA to
Annex B to
Appendix A

~~TOP SECRET~~

TAB AE TO ANNEX B TO APPENDIX A

TARGET NO. 18,31



~~TOP SECRET~~

A-B-AE-1

Tab AE to Annex B
to Appendix A

~~TOP SECRET~~

TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 18.31 1
2. BE NUMBER: 616-0480 2
3. IDENTIFICATION: Kep Highway Bridge over Song Thuong 3
4. DATE OF INFORMATION: 14 July 1966 4
DATE OF TIS: 20 June 1966 5
DATE OF PHOTOGRAPHY: 30 December 1964 6
DATE OF INTELLIGENCE REVIEW: 25 March 1965 7
5. LOCATION: 21-26-40N 106-17-52E, UTM XJ 344715. 8
Located on Route 1, approximately 2 NM N of Kep, over the 9
Song Thuong.. 10
6. DESCRIPTION: Oriented NNE/SSW; over-all dimensions 11
304' x 11' 4 main spans 58' in length, 2 approach spans 36' 12
in length; half-thru steel truss with wood plank decking 13
and ladder type slender concrete piers and concrete abut- 14
ments; prepared ford immediately adjacent to site. Banks 15
of the meandering Song Thuong are moderately sloping earth; 16
stream bed material is sand and alluvium of an unknown depth. 17
Bridge approximately 30' above water. 18
7. SIGNIFICANCE: This target is on the route which links 19
Hanoi with the South China border at Lang Son. 20
8. TARGET ENVIRONMENT: Area to north of bridge passes 21
through knobby plains with many steep-sided heavily forested 22
hills rising to 250' above the valley level. Area south of 23
bridge consists of flat cultivated plains with Kep canal 24
passing 500' to the south. 25
9. DEFENSE ENVIRONMENT: 26
 - a. Thirteen SAM sites have been identified within SA-2 27
missile range (17.5 NM) of the target, and 12 additional 28
SAM sites have been identified 18-30 NM distant. 29
 - b. Identified AAA activity in the Kep area includes 25 30
active AAA sites, consisting of 92 occupied 57/85-mm 31
revetments, and 66 occupied 37-mm revetments. In addition, 32
there are 5 inactive sites in the area. (DOI: 15 October 33
1965 - 8 June 1966) 34
 - c. Moderate to intense HMG and small arms fire is 35
anticipated, as there are 2 military barracks areas within 36
5 NM of the target. 37
10. DAMAGE OBJECTIVE: Interdiction of traffic between Hanoi 38
and Lang Son. Damage criteria are destruction of at least one 39
of the major spans and damage to adjacent ford, particularly 40
the steep side embankment to the approach on the north side. 41
11. EFFECT ON NVN: Interdiction of this target would 42
impede highway communications between Hanoi and South China. 43
12. RECUPERABILITY: Restoration of bridge would be diffi- 44
cult and almost impossible in less than 2 - 3 months if 45
piers were damaged. Ford could be rendered serviceable in 46
a few days with a concentrated earth-moving effort. 47

~~TOP SECRET~~

A-B-AE-2

Tab AE to
Annex B to
Appendix A

(Revised by 9th Note to Holders)

~~TOP SECRET~~

13. COLLATERAL DAMAGE: Insignificant.

14. RECOMMENDED WEAPONS AND SORTIES:

a. In order to achieve the desired damage criterion,
weapons/sorties required over target:

WEAPON:	250#	250#	500#	750#
	67/6	290/24	180/20	170/28

b. Weapons/sorties operationally required to achieve
"over target" requirement shown above:

	82/7	354/30	220/24	207/35

15. PROBABILITY OF ACHIEVING DAMAGE CRITERION: 85%

~~TOP SECRET~~

A-B-AE-3

Tab. A to
Annex E to
Appendix A

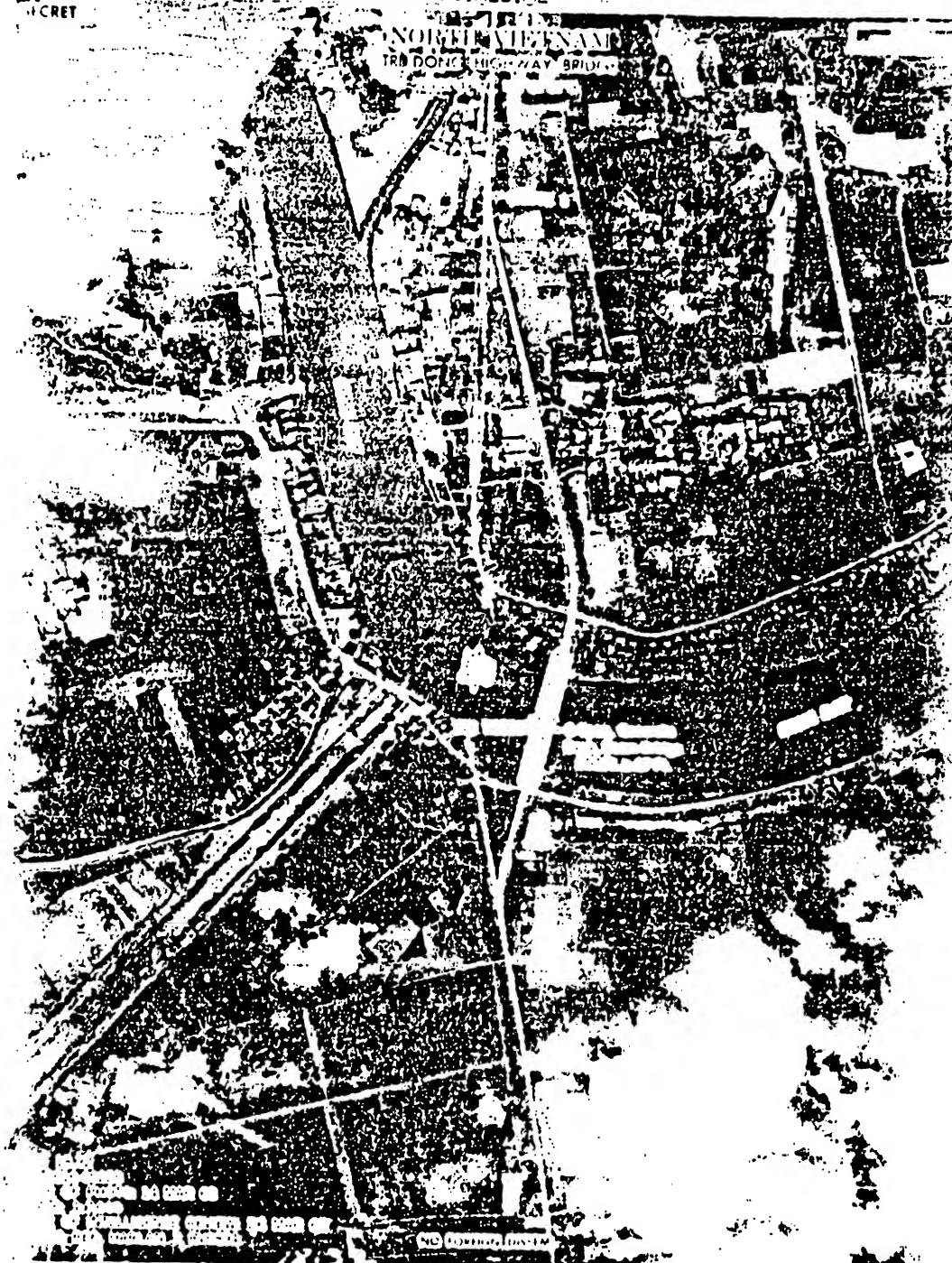
(Revised by 6th Note to Holders - 25 March 1966)

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TAB AF TO ANNEX B TO APPENDIX A

TARGET NO. 19.00

SECRET



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A-B-AF-1

Tab AF to Annex B
to Appendix A

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 18.32 1
2. BE NUMBER: 616-0225 2
3. IDENTIFICATION: Tri Dong Highway Bridge over Song Day 3
4. DATE OF INFORMATION: March 1965 4
DATE OF TIS: 24 June 1965 5
5. LOCATION: 20-21-40N/105-55-40E, UTM WH 966516. Located 6
on North Vietnam Route 1, at Tri Dong, approximately 7 NM NW 7
of Ninh Binh, over the Song Day. 8
6. DESCRIPTION: Bridge, oriented N/S, replaced an adjacent 9
ferry crossing in 1963 and is reported as longest prefabricated 10
concrete bridge in North Vietnam. Deck type superstructure is 11
595 ft long with 8 equal spans and has a 27 ft roadway. Banks 12
of the meandering Song Day have a moderate slope. 13
7. SIGNIFICANCE: Target is located on National Route 1, 14
the primary highway communication route between Hanoi and 15
southern North Vietnam. It controls traffic between the rail 16
and minor port facilities at Phu Ly and Ninh Binh. Should 17
this target be interdicted, there is a rail and highway bypass 18
route via Nam Dinh. The detour would be approximately 19 NM 19
longer than the through route. 20
8. TARGET ENVIRONMENT: Target at junction of Route 1 and 21
south-flowing, 125-yd. wide Song Day (river). Terrain in most 22
of target area consists of flat plains at elevation less than 23
30 ft above sea level; however, in northwestern section, 24
rugged, forested hills rise up to 1,100 feet above surrounding 25
lowlands. All arable land on plains under rice cultivation; 26
gardens lined with trees common in towns. Many towns north, 27
east and south of target area, but population density in 28
northwestern hilly section sparse. 29
9. DEFENSE ENVIRONMENT: 30
 - a. No AAA defenses are known to be in the vicinity of 31
this target. The closest site is located at Van Ha, 4 NM 32
to the southwest, which comprises 8 occupied 57mm/85mm 33
positions. (DOI: 12 February 1965). 34
 - b. AW defense would be anticipated since the 304th 35
Infantry Division is located in this general area. 36
 - c. This target lies within the GCI capabilities of EW/HF 37
radar at Hanoi. 38
10. DAMAGE OBJECTIVE: Interdiction of traffic between Hanoi 39
and Southern North Vietnam. Damage criterion is destruction 40
of at least one span. 41

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Appendix A

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13. COLLATERAL DAMAGE: Light damage to surrounding area. 1

14. RECOMMENDED WEAPONS AND SORTIES: 2

a. In order to achieve the desired damage criterion,
weapons/sorties required over target: 3
4

Weapon: 250# 250# 500# 750#
SNAKEYE or BOMB or BOMB or BOMB

50/4 160/13 90/10 70/12 5

b. Weapons/sorties operationally required to achieve
"over target" requirements shown above: 6
7

61/5 195/16 110/12 85/15 8

15. PROBABILITY OF ACHIEVING DAMAGE CRITERIA: 85%. 9

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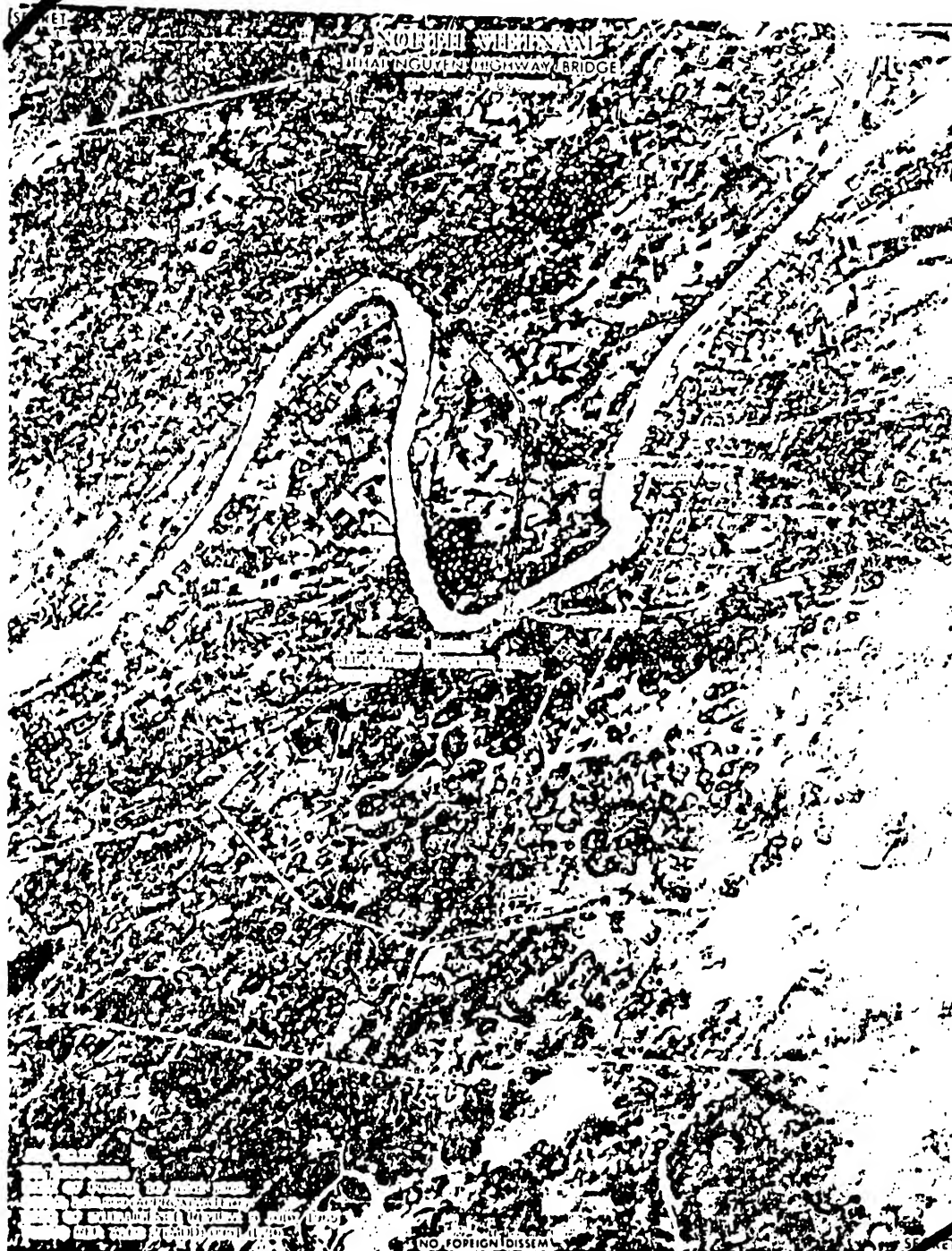
A-B-AF-3

Tab AF to
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Appendix A

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TAB A9 TO ANNEX B TO APPENDIX A

TARGET NO. 18.33



~~TOP SECRET~~
(Revised 31 August 1965)

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Tab A9 to
Annex B to
Appendix A

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 18.33 1
2. BE NUMBER: 616-0075 2
3. IDENTIFICATION: Thai Nguyen Hwy Br over Song Cau 3
4. DATE OF INFORMATION: 14 June 1966 4
DATE OF TIS: 20 June 1966 5
DATE OF PHOTOGRAPHY: 16 June 1965 6
DATE OF INTELLIGENCE REVIEW: 5 July 1965 7
5. LOCATION: 21 35-59N 105-50-30E, UTM WJ 869883, 8
located on North Vietnam Route 1B just west of the city of 9
Thai Nguyen. 10
6. DESCRIPTION: Oriented NE/SW, the bridge is a two-lane, 11
seven span high level reinforced concrete beam and deck type 12
structure with frame concrete piers and over-all dimensions 13
of 325 x 25 feet. 14
7. SIGNIFICANCE: The target lies on a secondary road 15
linking Route 3 with Route 4 at That Khe and is a potential 16
alternate to Routes 1A and 3 between Hanoi and support areas 17
in Kwangsi Province, China. 18
8. TARGET ENVIRONMENT: The target crosses the 300-foot 19
wide Song Cau approximately 1,000 yards west of Thai Nguyen. 20
The target area consists of flat plains and gently rolling 21
low hills. The plains extend 2 to 3 NM north of the river 22
and 1 to 2 NM to the south. Dissected hills, mostly to the 23
northeast and south, rise 100 to 200 feet above the plains. 24
Most of the area is cultivated in rice, but scrub and woods 25
are scattered through the north and east. Many towns are 26
located downstream from the target; remainder of the area is 27
sparsely settled. 28
9. DEFENSE ENVIRONMENT: 29
 - a. Seven SAM sites have been identified within SA-2 30
missile range (17.5 NM) of the target, and 11 additional 31
SAM sites have been identified 18-30 NM distant. 32
 - b. Identified AAA activity in the Thai Nguyen area 33
includes 10 active AAA sites, consisting of 75 occupied 34
57/85-mm revetments, 8 dummy 100-mm revetments and 16 35
dummy 57/85-mm revetments. In addition, there are 7 36
inactive sites in the area. (DOI: 17 August 1965 - 37
5 May 1966) 38
 - c. Intense HMG and small arms fire is anticipated 39
from local militia and security forces, as well as units 40
of the 312th Infantry Division. 41
10. DAMAGE OBJECTIVE: Interdiction of traffic between 42
Thai Nguyen and Dong Dang. Damage criterion is destruction 43
of at least one span. 44

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Appendix A

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11. EFFECT ON DRV: Interdiction of this target will
disrupt traffic between the rail terminus at Thai Nguyen
and Dong Dang. Destruction of the bridge would also
interfere with the movement of raw materials from mining
areas to the northeast into the Thai Nguyen industrial center.

12. RECUPERABILITY: Traffic could be rerouted upon
interdiction on a possible bypass via an alternate mining
road network and bridge located approximately 3400 yards to
the southeast of the target. An abandoned ferry site located
approximately 1400 feet northeast of the bridge could be
reactivated and provide additional bypass capability within
one or two days. Installation of a pontoon bridge at the
ferry site could increase the bypass capability within four
or five days. Reconstruction of the bridge to full capacity
would require from six to eight weeks.

13. COLLATERAL DAMAGE: Moderate damage to surrounding area.

14. RECOMMENDED WEAPONS AND SORTIES:

a. In order to achieve the desired damage objective,
weapons/sorties required over target:

WEAPON:	250# <u>SNAKEYE</u>	or	250# <u>BOMB</u>	or	500# <u>BOMB</u>	or	750# <u>BOMB</u>	
	55/5		230/19		135/15		100/17	20

b. Weapons/sorties operationally required to achieve
"over target" requirements shown above:

67/6	280/23	165/18	122/20	23
------	--------	--------	--------	----

15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 85% 24

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Tab AG to
Annex B to
Appendix A

(Revised by 6th Note to Holders - 25 March 1966)

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TAB AI TO ANNEX B TO APPENDIX A

TARGET NO. 18.35



SECRET

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Tab AI to Annex B
to Appendix A

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 18.35 1
2. DE NUMBER: 616-0073 2
3. IDENTIFICATION: Cho Moi Hwy Br over Song Cho 3
4. DATE OF INFORMATION: 14 June 1966 4
DATE OF TIC: 20 June 1966 5
DATE OF PHOTOGRAPHY: 15 March 1965 6
DATE OF INTELLIGENCE REVIEW: 3 April 1965 7
5. LOCATION: 21-52-55N 105-46-26E, UTM WK 801195. 8
Located on National Route 3, 0.7 NM east of Cho Moi, 0.7 NM E 9
of the confluence of the Song Cho and Song Cau rivers. 10
6. DESCRIPTION: Oriented NE/SW with over-all dimensions of 11
150' x 15' bridge is a 3-span concrete decked part thru steel 12
truss structure with a center span of 65 feet. Piers and 13
abutments are of concrete. The banks of the meandering Song 14
Cho are gently sloped. Stream width at the bridge site is 15
approximately 100'. There is a prepared ford located 800' E 16
of the bridge and possible alternate ford/ferry crossing 170' 17
E of the site. Both are located on secondary roads leading 18
to and from the main road. 19
7. SIGNIFICANCE: Bridge located on road which links the 20
South China border, near Cao Bang and Hanoi, and controls 21
traffic between Thai Nguyen and Bac Can. 22
8. TARGET ENVIRONMENT: The highway is situated in the 23
narrow valley of the Song Cau to the north and a small stream 24
to the south. The valley floor is relatively flat, cultivated, 25
and lightly populated. It is bordered by dense forests and 26
steep mountains, thus, off-road movement is poor, with few 27
exits from the main highway. 28
9. DEFENSE ENVIRONMENT: 29
 - a. Four SAM sites have been identified within SA 30
range (17.5 NM) of this target and 2 additional sites 31
20-30 NM distant. 32
 - b. No AAA defenses have been identified in this area. 33
 - c. No military forces are known to be in this area; 34
however, small arms fire from local militia would be 35
anticipated. 36
10. DAMAGE OBJECTIVE: Interdiction of traffic between Thai 37
Nguyen and Bac Can. Damage criterion is destruction of 38
center span; damage to ford and possible alternate bridge. 39

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Appendix A

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11. EFFECT ON DRV: Effective continuous interdiction of this crossing site would seriously hamper the flow of highway traffic between Thai Nguyen and Bao Can, and force traffic between South China and Hanoi onto another route. 1
12. RECUPERABILITY: Forging possibilities in the vicinity appear easy and should offer no difficulties for bypassing the bridge within 1 - 2 days in time of low water. Temporary measures to repair one damaged span with a timber trestle would take up to a week. Restoration to original capacity would take one to two months. 2
13. COLLATERAL DAMAGE: Insignificant. 3
14. RECOMMENDED WEAPONS AND SORTIES: 4
- a. In order to achieve the desired damage criterion, weapons/sorties required over target: 5
- | WEAPON: | 250# | 250# | 500# | 750# |
|---------|---------|--------|--------|--------|
| | SNAKEYE | BOMB | BOMB | BOMB |
| | or | or | or | or |
| | 115/10 | 500/42 | 300/33 | 215/36 |
- b. Weapons/sorties operationally required to achieve "over target" requirements shown above: 6
- | WEAPON: | 250# | 250# | 500# | 750# |
|---------|---------|--------|--------|--------|
| | SNAKEYE | BOMB | BOMB | BOMB |
| | or | or | or | or |
| | 140/12 | 610/51 | 366/41 | 262/44 |
15. PROBABILITY OF ACHIEVING DESIRED DAMAGE CRITERION: 85% 7

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Appendix A

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11. EFFECT ON DRV: Effective continuous interdiction of this crossing site would seriously hamper the flow of highway traffic between Thai Nguyen and Bac Can, and force traffic between South China and Hanoi onto another route. 1
2
3
4

12. RECUPERABILITY: Fording possibilities in the vicinity appear easy and should offer no difficulties for bypassing the bridge within 1 - 2 days in time of low water. Temporary measures to repair one damaged span with a timber trestle would take up to a week. Restoration to original capacity would take one to two months. 5
6
7
8
9
10

13. COLLATERAL DAMAGE: Insignificant. 11

14. RECOMMENDED WEAPONS AND SORTIES: 12

a. In order to achieve the desired damage criterion, weapons/sorties required over target: 13
14

WEAPON:	250# <u>SNAKEYE</u>	or	250# <u>BOMB</u>	or	500# <u>BOMB</u>	or	750# <u>BOMB</u>	
	115/10		500/42		300/33		215/36	15

b. Weapons/sorties operationally required to achieve "over target" requirements shown above: 16
17

140/12	610/51	366/41	262/44	18
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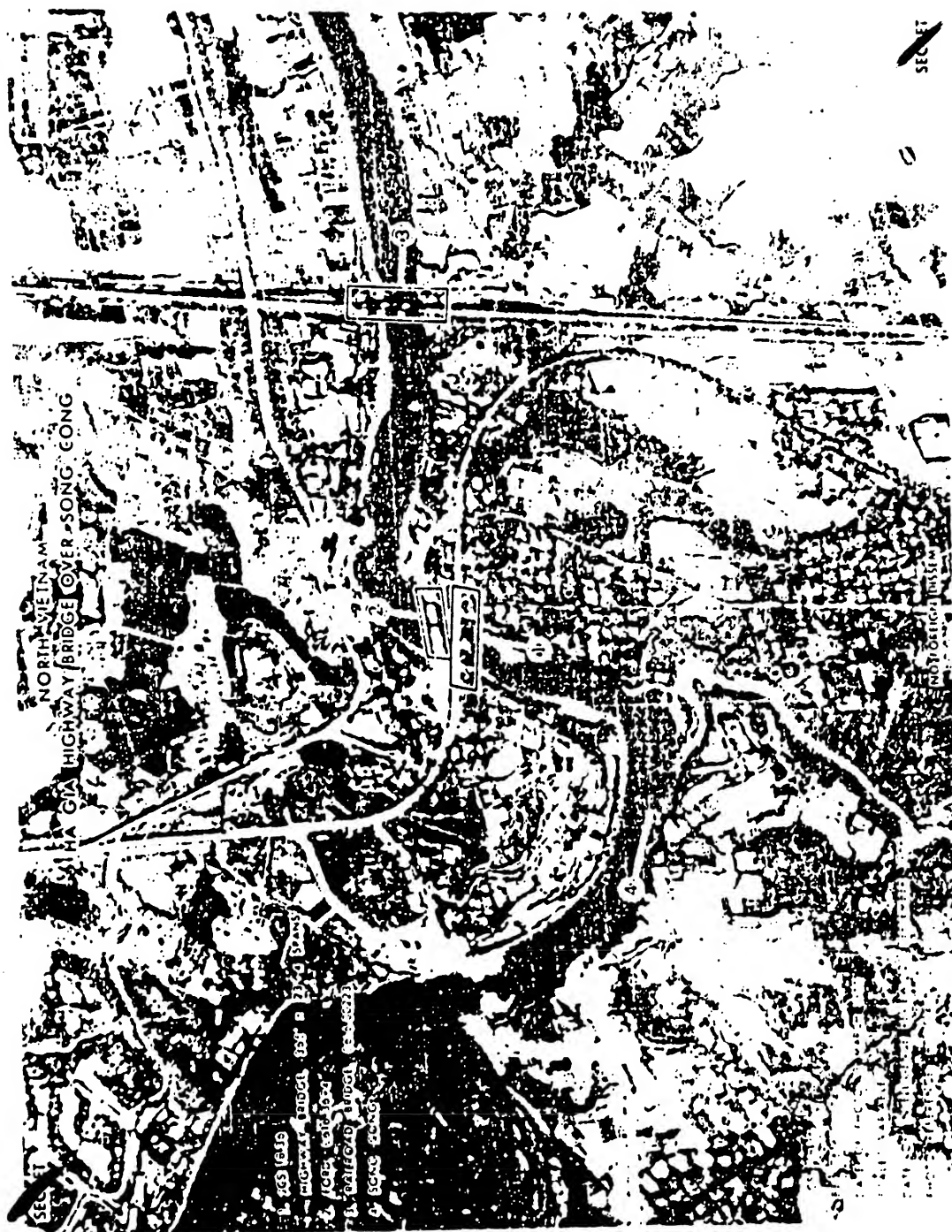
15. PROBABILITY OF ACHIEVING DESIRED DAMAGE CRITERION: 85% 19

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Appendix A

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 18.36 1

2. D.E. NUMBER: 616-0074 2

3. IDENTIFICATION: Ha Gia Highway Br over Song Cong 3

4. DATE OF INFORMATION: 27 August 1968 4
DATE OF TISD: 5 November 1968 5
DATE OF PHOTOGRAPHY: 3 March 1966 6
DATE OF INTELLIGENCE REVIEW: 25 September 1968 7

5. LOCATION: 21-19-40N 105-52-28E, located on North Vietnam 8
Route 3, crossing the Song Cong near its confluence with the 9
Song Cau approximately 22 NM N of Ha Noi. 10

6. DESCRIPTION: Oriented ESE/WHW, the bridge is a 4-span 11
concrete deck and steel half-thru truss structure on slender 12
concrete piers with overall dimensions of 365 x 23 feet. One 13
ford (616-3694) is located just NE of the bridge, a railway bridge 14
(616-0223) just E of the target, and a ford (616-3693) and ferry 15
(616-3692) approximately 1800 feet to the NW. 16

7. SIGNIFICANCE: The target is situated approximately half- 17
way between Ha Noi and the industrial center at Thai Nguyen. 18
Route 3 provides access from Kwangai Province, China, to Ha Noi 19
via the road complex at Cao Bang. Should the target be interdicted, 20
traffic to Ha Noi from the N could continue over the more distant 21
Routes 1 and 2; direct highway traffic between Thai Nguyen and 22
Ha Noi would be interrupted. There is an alternate rail LOC between 23
Thai Nguyen and Ha Noi which generally parallels Route 3. 24

8. TARGET ENVIRONMENT: The target crosses the Song Cong (river) 25
about 1.4 NM W of its confluence with the Song Cau. The river is 26
about 300 feet wide at the crossing. The target lies on a generally 27
flat plain with elevations under 70 feet NW of the target, some 28
elevations reach 150 feet. Wetland rice cultivation predominates 29
in the low areas; the higher areas contain mostly scrub and woods. 30
Poor drainage necessitates a raised roadbed for 2 1/2 miles N of 31
the target. Predominantly wet soils around the target would make 32
off-road movement difficult. 33

9. DEFENSE ENVIRONMENT: 34

a. The target is within the SAM envelope. 35

b. AAA activity has been identified within 3 NM of the 36
target. 37

c. HMG and small arms fire is anticipated. 38

10. DAMAGE OBJECTIVE: Destruction of at least one span. 39

11. EFFECT ON NVN: Interdiction of this target would disrupt 40
highway traffic between the steel center at Thai Nguyen and the 41
machine shops in Ha Noi. 42

~~SECRET~~ NO FOREIGN DISSEM EXCLUDED FROM AUTOMATIC DOWNGRADING

(Revised by 15th Note to Holdern)
A-H-AJ-2

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Appendix A

~~SECRET~~

12. RECUPERABILITY: Limited bypass could be achieved within a matter of hours over the existing ford and ferry bypasses depending upon the water level, condition of the crossings, and availability of ferry equipment. The bridge could be temporarily repaired with timber deck and trestling or as an over-the-cable span within 2 weeks. Reconstruction to full pre-strike status could be accomplished in 6-8 weeks.

13. COLLATERAL DAMAGE:

a. Light damage to surrounding area

b. Population

Casualties*

Target Area Adjacent Area Target Area Adjacent Area

Mil Civ Mil Civ Mil Civ Mil Civ

0 0 0 380 0 0 0 4

*Casualties estimated under daylight alert conditions.

14. RECOMMENDED WEAPONS AND SORTIES:

a. In order to achieve the desired damage criterion, weapons/sorties required over target:

WEAPON	250# SNAKEYE or	500# SNAKEYE or	500# BOMB or	750# BOMB
(365 x 23)	1384/115	281/31	1155/128	187/31

b. Weapons/sorties operationally required to achieve "over target" requirement shown above:

1661/138 338/38 1386/154 225/38

15. PROBABILITY OF ACHIEVING DESIRED DAMAGE CRITERION: 85%

~~SECRET~~ NO FOREIGN DISSEM EXCLUDED FROM AUTOMATIC DOWNGRADING

(Revised by 15th Note to Holders)

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Annex B to
Appendix A

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TAB AL TO ANNEX B TO APPENDIX A

TARGET NO. 18.38



~~TOP SECRET~~
(Revised by 10th N/B)

A-B-AL-1

Tab AL to Annex B
to Appendix A

~~TOP SECRET~~

TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 18.38 1
2. BE NUMBER: 616-0714 2
3. IDENTIFICATION: Dan Phuong Hwy Causeway ov Song Day 3
4. DATE OF INFORMATION: 12 August 1966 4
DATE OF TIS: 13 August 1966 5
DATE OF PHOTOGRAPHY: 12 February 1965 6
DATE OF INTELLIGENCE REVIEW: 19 April 1965 7
5. LOCATION: 21-04-25N 105-38-58E, UTM WJ 674304. Located on 8
North Vietnam Route 11-A approximately 14 NM WNW of Ha Noi. Crosses 9
Song Day approximately 5 NM S of confluence with Red River and 10 NM E of 10
town of Son Tay. 11
6. DESCRIPTION: Target is an earthen causeway (1) with a length of 600 12
ft and topped by an 18 ft wide roadway on an embankment approximately 20 ft 13
high. Causeway replaces a bridge crossing 1350 yds to the north. Bypass 14
conditions are easy with an alternate pedestrian crossing consisting of a 7 ft 15
wide steel structure over a concrete dam approximately 900 yds north of 16
target. Approach roads to the causeway are on dikes. The Song Day narrows 17
to a small stream as it passes under the causeway through an opening no more 18
than 30 ft wide. 19
7. SIGNIFICANCE: The target, situated between Ha Noi and Son Tay, is 20
on a secondary road which could serve as an alternate to National Route 2 21
between Ha Noi and Ngoc Thap and the northwest rail line between Ha Noi and 22
Phu Tho on the Red River. Route 182 has two bottlenecks - a ferry at WJ 23
366478 over the Riviere Noire and another ferry at Phu Tho over the Red 24
River. Should the target be interdicted, an alternate crossing of the Song Day 25
would be at Hai Linh on National Route 6, approximately 12 NM to the south. 26
8. TARGET ENVIRONMENT: Target located on Song Day (river) in area 27
of broad flat plains, approximately 2,500 yards SW of Dan Phuong. Most of 28
area less than 30 feet above sea level. Wetfield rice cultivation predominates 29
except for orchards in NE and SE, and tree-lined gardens in towns. Many 30
towns in area. Good transportation net in area, including roads on fills and 31
levees and numerous tracks and trails. 32
9. DEFENSE ENVIRONMENT: 33
 - a. Thirteen SAM sites have been identified within SA-2 missile range 34
(17.5 NM) of this target, and 18 additional SAM sites have been identified 35
18-30 NM distant. 36
 - b. Identified AAA activity in this area includes one active site (4 37
occupied 37mm revetments) and 4 inactive sites. (DOI: 3 March 1966) 38

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A-B-AL-2

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Appendix A

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- c. Light machine gun and small arms fire from local militia would be anticipated. 1
2
10. DAMAGE OBJECTIVE: Interdiction of traffic on alternate to Route 2 between Ha Noi and Phu Tho. Damage criterion is damage to roadway and embankment. 3
4
5
11. EFFECT ON NVN: Interdiction of this target would decrease the effectiveness of this route as an alternate to Route 2 between Ha Noi and Phu Tho. 6
7
8
12. RECUPERABILITY: Restoration of any portion of this causeway appears moderately easy, requiring only earth-moving operations and could be done in from 3 - 5 days. 9
10
11
13. COLLATERAL DAMAGE: 12
- a. None 13
- b. Population Casualties* 14
- | Population | | | | Casualties* | | | |
|-------------|-----|---------------|-----|-------------|-----|---------------|-----|
| Target Area | | Adjacent Area | | Target Area | | Adjacent Area | |
| Mil | Civ | Mil | Civ | Mil | Civ | Mil | Civ |
| 0 | 0 | 0 | 25 | 0 | 0 | 0 | 0 |
- *Casualties estimated under daylight alert conditions. 19
14. RECOMMENDED WEAPONS AND SORTIES: 19
- a. In order to achieve desired damage criterion, weapons/sorties required over target: 20
21
- | WEAPON | 250#
SNAKEYE | 250#
or BULLPUP | 250#
or BOMB | 500#
or BOMB | 750#
or BOMB |
|----------|-----------------|--------------------|-----------------|-----------------|-----------------|
| (600x18) | 13/2 | 13/7 | 50/5 | 50/6 | 50/9 |
- b. Weapons/sorties operationally required to achieve "over target" requirements shown above: 23
24
- | | | | | |
|------|------|------|------|-------|
| 16/2 | 16/8 | 61/6 | 61/7 | 61/11 |
|------|------|------|------|-------|
15. PROBABILITY OF ACHIEVING DESIRED DAMAGE CRITERION: 85%. 26

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Appendix A

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TAB AO TO ANNEX B TO APPENDIX A

TARGET NO. 18.41



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A-B-AO-1

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to Appendix A

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 18.41 1
2. BE NUMBER: 616-0726 2
3. IDENTIFICATION: Ban Pom Lot Hwy Br S over Stream 3
4. DATE OF INFORMATION: February 1965 DATE OF TIS: 24 April 1965 4
5
5. LOCATION: 21-16-41N 103-00-30E UTM 48Q TJ 933541, 6
located on Route 19 approximately 6 NM south of Dien Bien Phu. 7
6. DESCRIPTION: Bridge, newly constructed, is a steel 8
half through truss, 3 spans with approximate length 260'; 9
roadway width 12 feet and limited to one lane traffic. Water 10
gap in the vicinity of the bridge site is 105'. The bridge is 11
on a realigned section of road replacing an existing 160' ford 12
approximately 1/4 NM to the east. 13
7. SIGNIFICANCE: The target lies on the principal route 14
from the Dien Bien Phu area of North Vietnam into northern 15
Laos. The importance of this border region is demonstrated 16
by the fact that Route 19 has been under realignment and 17
reconstruction and two trails leading west and south from the 18
route have been developed into motorable alternate border 19
crossings. Should the target be interdicted, Laos Route 44 20
could be used as an alternate. 21
8. TARGET ENVIRONMENT: Target is at the southern end of 22
the Dien Bien Phu plain, which is enclosed by rugged, forested 23
mountains. The plain extends 11 NM N, 1 NM S, 1.3 NM E, and 24
5 NM W of target; it is mostly planted in rice, but open 25
forest extends W from the target to the mountains. A steep 26
embankment is located .5 NM NE of target. 27
9. DEFENSE ENVIRONMENT: 28
 - a. No AAA is known to be in the vicinity. The closest 29
AAA defenses are located in the Dien Bien Phu military 30
complex, approximately 7 NM to the north, and consists of 31
3 active sites with 62 occupied 14.5mm-37mm positions. 32
(FOI: 13 March 1965) 33
 - b. The 316th Infantry Division is located in the Dien 34
Bien Phu military complex, and since this target is readily 35
accessible, AW defense would be anticipated. 36
 - c. This target lies within the capabilities of the EW 37
radar at Dien Bien Phu. 38
10. DAMAGE OBJECTIVE: Destruction of at least one span and 39
damage to ford. 40
11. EFFECT ON DRV: Interdiction of this target would hinder 41
traffic between the Dien Bien Phu area of North Vietnam and 42
northern Laos. 43
12. RECUPERABILITY: Assuming higher bridge elevation and 44
one main stream channel span of at least 75', this bridge 45
could not be easily restored in event of interdiction. Re- 46
course to improvement and use of old fording site as an 47

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A-B-AO-2

Tab AO to
Annex B to
Appendix A

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immediate measure is expected. Providing damage occurs at other than height of wet season, traffic should be reopened over a prepared ford crossing within 2 days.

13. COLLATERAL DAMAGE: Insignificant.

14. RECOMMENDED WEAPONS AND SORTIES:

a. In order to achieve the desired damage level, weapons/sorties required over target:

Weapon:	250# <u>SNAKEYE</u>	or	250# <u>BOMB</u>	or	500# <u>BOMB</u>	or	750# <u>BOMB</u>
	160/13		660/55		290/32		200/33

b. Weapons/sorties operationally required to achieve "over target" requirements shown above:

195/26	804/67	353/39	243/40
--------	--------	--------	--------

15. PROBABILITY OF ACHIEVING DAMAGE CRITERION: 85%

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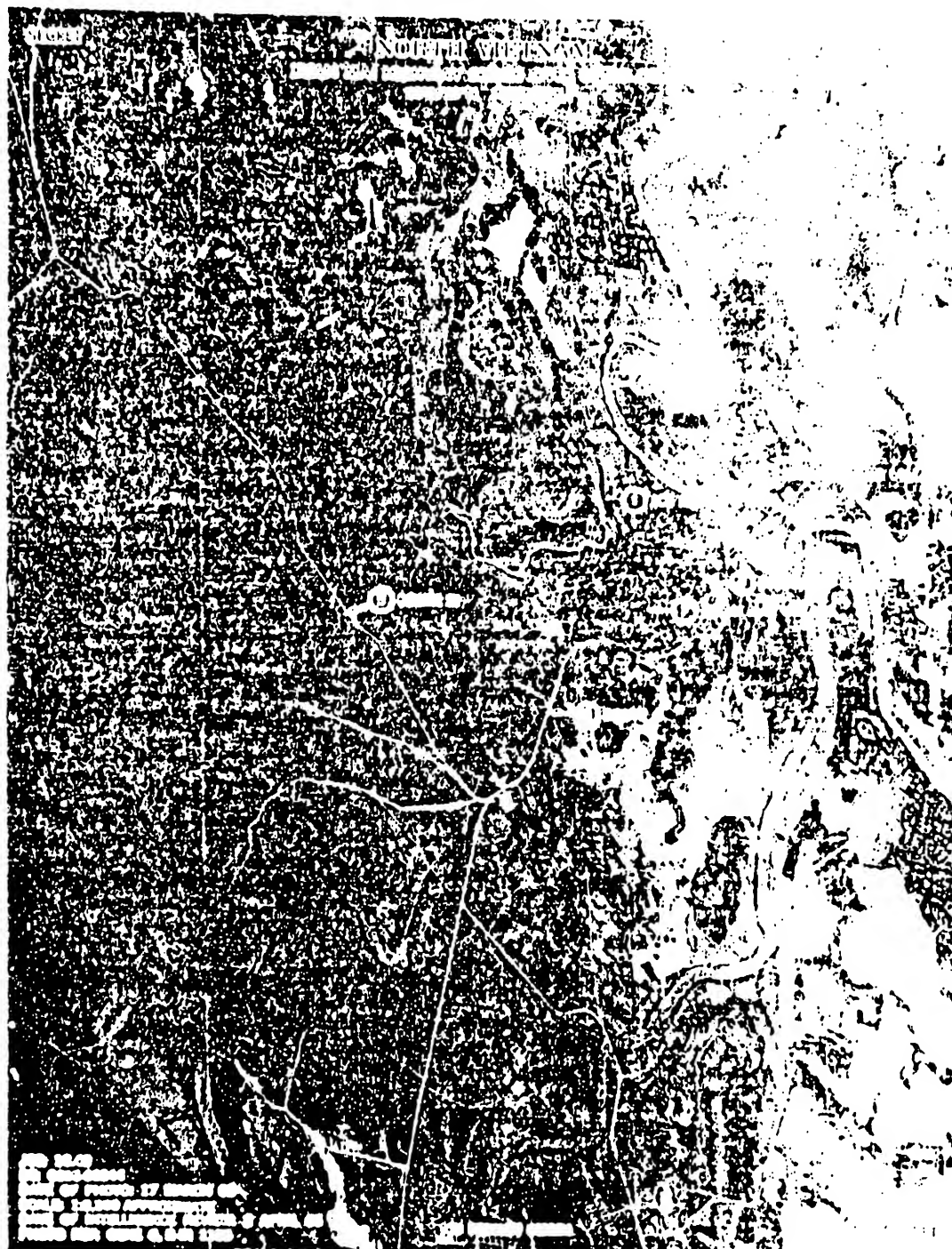
A-B-A0-3

Tab A0 to
Annex B to
Appendix A

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TAB AP TO ANNEX B TO APPENDIX A

TARGET NO. 18.42



~~TOP SECRET~~
(Revised by 10th N/H)

A-B-AP-1

Tnt AP to Annex B
to Appendix A

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TARGET INFORMATION AND STRIKE DATA

1. <u>TARGET NUMBER:</u> 18.42	1
2. <u>BE NUMBER:</u> 616-0244	2
3. <u>IDENTIFICATION:</u> Xuan Mai Hwy Br ov Song Con	3
4. <u>DATE OF INFORMATION:</u> 12 August 1966	4
<u>DATE OF TIS:</u> 13 August 1966	5
<u>DATE OF PHOTOGRAPHY:</u> 17 March 1965	6
<u>DATE OF INTELLIGENCE REVIEW:</u> 2 April 1965	7
5. <u>LOCATION:</u> 20-54-28N 105-36-00E, UTM WJ 624113. Located on National Route 6, approximately 18 NM SW of Ha Noi.	8 9
6. <u>DESCRIPTION:</u> Bridge (1), oriented NE/SW, recently constructed on new road alignment replacing partially dismantled old steel truss bridge. Overall dimensions 225 ft by 18 ft; reinforced concrete deck-type structure. Pier supports are undetermined. This bridge has embanked concrete abutments.	10 11 12 13 14
7. <u>SIGNIFICANCE:</u> This bridge carries traffic on Route 6 over the Song Con and is situated between the capital city of Ha Noi and Hoa Binh. Route 6 is a limited all-weather road providing access to northwestern North Vietnam and several border crossing points into northern Laos primarily in the vicinity of Dien Bien Phu and east of Sam Neua.	15 16 17 18 19
8. <u>TARGET ENVIRONMENT:</u> The bridge crosses the Song Con about 250 yards NW of river's confluence with the Song Day; the Song Con is about 90 feet wide at this point. Within a two NM radius of the target, flat, poorly drained plains at an elevation of 30 to 65 ft predominate. Flat plains give way to rolling plains about 1.1 NM W of target. Wetland rice covers most of area grasslands are found about 1.1 NM W and SW of target.	20 21 22 23 24 25
9. <u>DEFENSE ENVIRONMENT:</u>	26
a. Ten SAM sites have been identified within SA-2 missile range (17.5 NM) of the target, and 15 additional SAM sites have been identified 18-30 NM distant.	27 28 29
b. Identified AAA activity in this general area includes 5 active sites containing 40 occupied 57mm/85mm revetments and 14 inactive sites. In addition, there are 11 sites approximately 3 NM to the north in the Hoa Muc area. These sites comprise 32 occupied and 54 unoccupied 57mm/45mm positions. (DOI: 7 November 1965 - 3 March 1966)	30 31 32 33 34
c. Intense HMG and small arms fire is anticipated from the Xuan Mai Army Barracks SSW and from the Xuan Mai Army Barracks NNW, Hoa Muc.	35 36

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A-B-AP-2

Tab AP to
Annex B to
Appendix A

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10. DAMAGE OBJECTIVE: Interdiction of traffic between NW NVN and northern Laos. Damage criterion is destruction of at least one span. 1 2

11. EFFECT ON NVN: Interdiction of this target would hinder traffic between northwestern North Vietnam and northern Laos. Should this bridge be interdicted, a bypass of considerable distance would be required to cross the Song Con. 3 4 5 6

12. RECUPERABILITY: Assuming favorable stream bottom characteristics and limit of stream gap to 90 ft, a temporary trestle crossing may be installed adjacent to present bridge site within one week. If the bridge has two stream spans, as suspected, repair of one damaged span of approximately 45 ft could be effected within the same period. 7 8 9 10 11

13. COLLATERAL DAMAGE: 12

a. Insignificant 13

b. Population Casualties* 14

Target Area Adjacent Area Target Area Adjacent Area 15

Mil Civ Mil Civ Mil Civ Mil Civ 16

0 0 0 50 0 0 0 3 17

*Casualties estimated under daylight alert conditions. 18

14. RECOMMENDED WEAPONS AND SORTIES: 19

a. In order to achieve desired damage criterion, weapons/sorties required over target: 20 21

WEAPON	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	750# BOMB	
(225x18)	80/7		350/30		200/23		165/28	22

b. Weapons/sorties operationally required to achieve "over target" requirements shown above: 23 24

98/9	427/36	244/28	195/33	25
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15. PROBABILITY OF ACHIEVING DESIRED DAMAGE CRITERION: 85%. 26

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Tab AP to
Annex B to
Appendix A

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TAB AR TO ANNEX B TO APPENDIX A

TARGET NO. 18.44



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(Revised 31 August 1965)

A-B-AR-1

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Appendix A

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 18.44 1
2. BE NUMBER: 617-0979 2
3. IDENTIFICATION: Phuc Thiem Hwy Br ov Stream 3
4. DATE OF INFORMATION: March 1965 DATE OF TIS: 4
5 July 1966 5
5. LOCATION: 18-57-51N 105-34-20E UTM WF 602968. Located 6
on North Vietnam Route 7 approximately 2 NM WSW of the junction 7
of Routes 1 and 7 at Yen Lang. 8
6. DESCRIPTION: The bridge is a probable single span 9
concrete or masonry arch structure with over-all dimensions 10
of 100 x 15 feet. The approach road is elevated both east 11
and west of the bridge with two earthen causeways crossing 12
a manmade oxbow lake just east of the bridge. 13
7. SIGNIFICANCE: The target lies on Route 7, one of the 14
primary supply routes to Viet Minh and Pathet Lao units in 15
central Laos. It controls highway traffic between Route 1 16
and Vinh Son. There is no immediate bypass. 17
8. TARGET ENVIRONMENT: The target lies in the low-lying, 18
flat coastal plain dissected by several small rivers and 19
canals. The roadway is embanked in the target area, making 20
off-road movement impossible in the rainy season. The 21
surrounding area is cultivated to the fullest extent. 22
Population density is light and is restricted to small 23
farming clusters, none of which are located in the immediate 24
vicinity of the target. 25
9. DEFENSE ENVIRONMENT: There are no known AAA in the 26
vicinity of this target and the closest sites are 27
approximately 20 NM distant. No AW defenses or trenching are 28
evident, and no military units are reported in the area. The 29
target lies within a 20-mile radius of 3 EW, 1 CW and 1 HP 30
radars. 31
10. DAMAGE OBJECTIVE: Interdiction of traffic between 32
Route 1 and Vinh Son. Damage criterion is destruction of 33
the bridge and east approach causeways. 34
11. EFFECT ON DRV: Interdiction of this bridge would 35
effectively halt vehicular traffic between Route 1 and Vinh 36
Son requiring a lengthy detour to the north over Route 116 37
to Phu Qui and south to Vinh Son on 117 extended. 38
12. RECUPERABILITY: Interdiction of the bridge and 39
eastern approach causeways would require extensive earthwork 40
repairs to recover trafficability. Most likely recovery 41
measure of the bridge would be to install a reduced capacity 42
timber structure from lumber supplies at Vinh Son. Both 43
road reconstruction and bridge replacement could be accomplish- 44
ed in one week to ten days. Reconstruction of the bridge to 45
prestrike capacity could be accomplished in four to six 46
weeks. 47

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A-B-AR-2

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13. COLLATERAL DAMAGE:

a. Insignificant

b. Population

Casualties*

Target Area		Adjacent Area		Target Area		Adjacent Area	
Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ
0	0	0	5	0	0	0	1

*Casualties estimated under daylight alert conditions.

14. RECOMMENDED WEAPONS AND SORTIES:

a. In order to achieve the desired damage criterion, weapons/sorties required over target:

Weapon	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	750# BOMB
	190/16		750/63		450/50		350/58

b. Weapons/sorties operationally required to achieve "over target" requirements shown above:

232/19	915/77	549/61	427/71
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15. PROBABILITY OF ACHIEVING DAMAGE CRITERION: 85%

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A-B-AR-3

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CAS AT TO ANNEX B TO APPENDIX A

TARGET NO. 18.46



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(Revised 31 August 1965)

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APPENDIX A
TARGET NO. 18.46

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 18.46 1
2. BE NUMBER: 617-0975 2
3. IDENTIFICATION: Xom Thai Xa Hwy Br over Stream 3
4. DATE OF INFORMATION: 23 June 1965 4
DATE OF TIS: 5 July 1966 5
DATE OF PHOTOGRAPHY: 1 June 1965 6
DATE OF INTELLIGENCE REVIEW: 10 June 1965 7
5. LOCATION: 18-40-37N 105-36-33E, UTM WF 643650. 8
Located on Route 15, 3.5 NM W of Vinh, over unnamed stream; 9
possibly a canal. 10
6. DESCRIPTION: Oriented E/W with over-all dimensions of 11
120 x 10 feet, the bridge is a three span reinforced concrete 12
beam and deck structure on concrete frame piers. There are 13
six bridges of apparent low capacity located within 14
approximately 3 NM which could serve as alternate crossings 15
of the stream. 16
7. SIGNIFICANCE: Located on Route 15 between its junction 17
with Route 7 and Vinh. This route serves as one of the 18
alternates to the coastal Route 1 and provides access to 19
Laos through the Barthelemy Pass. 20
8. TARGET ENVIRONMENT: Terrain is generally flat, inter- 21
spersed with streams which, although narrow, would provide 22
some hindrance to cross-country movement. A narrow chain 23
of rugged hills directly to the N rise to an elevation of 24
550 feet. Wetland rice cultivation predominates, and the 25
area is moderately populated with numerous small villages. 26
There is an unknown industry, possibly a concrete manufactur- 27
ing plant, located at the W end of the bridge. 28
9. DEFENSE ENVIRONMENT: 29
 - a. No AAA defenses have been identified in the 30
immediate target area. However, target is only 3.5 NM 31
west of Vinh which is the center of an extensive AAA 32
network. There are 11 active 57mm/85mm sites (88 33
positions occupied, 4 positions unoccupied, 2 active 34
14.5mm-37mm sites (6 occupied positions) and an occupied 35
3-position 12.7mm site. There are 19 inactive sites in 36
the area (2 under construction) containing 134 57mm/85mm 37
positions and 6 14.5mm-37mm positions. 38
 - b. There are 3 EW radars, a height finder and 5 fire 39
control radars in the Vinh area. There are also 3 EW 40
radars at Anh Son. 41
 - c. In addition to AAA battalions and signal troops 42
there are two independent infantry regiments reported in 43
the Vinh area.
10. DAMAGE OBJECTIVE: Interdiction of minor bridges in 44
area. Damage criterion is destruction of at least one span. 45

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11. EFFECT ON DRV: Destruction of this target would hamper
highway traffic bypassing a possible interdiction of Route 1.

12. RECUPERABILITY: Immediate bypass would be attempted by
rerouting traffic over the substantial network of secondary
local roads in the area. Reconstruction of the bridge to
former condition and capacity should take no more than a
month, assuming no pier damage, on the basis of possible
availability of concrete structural members from nearby
concrete manufacturing plant.

13. COLLATERAL DAMAGE:

a. Light damage to surrounding area

b. Population

Casualties*

Target Area	Adjacent Area	Target Area	Adjacent Area
Mil	Civ	Mil	Civ
0	0	0	0
0	0	300	0

*Casualties estimated under daylight alert conditions.

14. RECOMMENDED WEAPONS AND SORTIES:

a. In order to achieve the desired damage level,
weapons/sorties required over target:

WEAPON:	250# SNAKEYE	or	500# BOMB	or	750# BOMB	or	1000# BOMB
	390/33		800/89		445/74		390/130

b. Weapons/sorties operationally required to achieve
"over target" requirements shown above:

476/40	976/109	543/90	476/159
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15. PROBABILITY OF ACHIEVING DAMAGE CRITERION: 85%

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TAB AU TO ANNEX B TO APPENDIX A

TARGET NO. 18.47



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A-B-AU-1

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to Appendix A

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 18.47 1
2. BE NUMBER: 617-0258 2
3. IDENTIFICATION: Ly Nahn Hwy Br ov Song Bang 3
4. DATE OF INFORMATION: March 1965 DATE OF TIS: 14 April 1965 4
5. LOCATION: 19-00-24N 105-35-33E, UTM WG 623014. Located 6
1 NM W of Ly Nahn on Route 1. 7
6. DESCRIPTION: Oriented N/S with overall dimensions of 8
390' x 21', this bridge is a 5-span concrete deck-type 9
structure with concrete piers and abutments. Both approaches 10
are elevated and the approach roads are built on levees. 11
A by-pass is available over local roads utilizing a low- 12
capacity bridge approximately 1 NM to the south. The 13
naturally shallow-sloped banks of the Song Bang are diked in 14
this region to control flood waters. 15
7. SIGNIFICANCE: Bridge is on the road which links Vinh 16
with Thanh Hoa and other points north. National Route 7 17
connects with this road approximately two NM south of the 18
target. 19
8. TARGET ENVIRONMENT: The bridge is on the low-lying 20
coastal flatlands less than 2 NM inland from the Gulf of 21
Tonkin and approximately 30 NM north of Vinh. The south shore 22
area is sparsely populated and there is a small village on 23
the north shore, although the overall population density is 24
light as the region is cultivated. 25
9. DEFENSE ENVIRONMENT: No AAA defenses have been identified 26
in the target area and no operational troops are known to be 27
nearby. However a fire control radar has recently been 28
reported at Cap Falaie 10 NM NE and probably an AAA site of 29
at least 8 medium (57mm-85mm) positions is associated with it. 30
In this area are also 6 unoccupied coastal gun positions and 31
an associated system of trenches approximately 600 yds from 32
the beach. A support building is just inland. 33
10. DAMAGE OBJECTIVE: Destruction of at least one span. 34
- EFFECT ON NVN: Interdiction of this bridge would hamper 35
high way traffic between Vinh and Thanh Hoa, and would inter- 36
fere with the flow of supplies from the north into Laos via 37
Route 7. 38
12. RECUPERABILITY: Upon interdiction of this bridge 39
essential traffic would be routed over the low-capacity bypass 40
to the south. A full capacity bypass utilizing a three-span 41
steel truss rail bridge (B.E. No. 617-0022) located 42
approximately 2 NM to the south over the bed of a dismantled 43
rail line could be in use within one or two days. The average 44
80' length of over-water span would require at least 4 weeks 45
to place back in operation with concrete construction to match 46
the present design. Expedient bridging would have to depend 47
on other resources than in the local area. Most likely 48

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Appendix A

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nearest material source would be timber which, with additional
immediate repair, could be used to close a spare gap within
2 days once available on site. Reduced load capacity would
remain a problem at this point.

13. COLLATERAL DAMAGE: Light

14. RECOMMENDED WEAPONS AND SORTIES:

a. In order to achieve the desired damage criterion,
weapons/sorties required over target:

Weapon:	250#	250#	500#	750#
	<u>SNAKEYE</u>	<u>BOMB</u>	<u>BOMB</u>	<u>BOMB</u>
	55/5	240/20	140/16	100/17

b. Weapons/sorties operationally required to achieve
"over target" requirements shown above:

67/6	293/24	175/20	127/21
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15. PROBABILITY OF ACHIEVING DAMAGE CRITERION: 85%

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TARGET NO. 18.49



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to Appendix A

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 18.49 1
2. BE NUMBER: 617-0978 2
3. IDENTIFICATION: San Dinh Hwy Br ov Song Kien 3
4. DATE OF INFORMATION: February 1965 DATE OF TIS: 15 April 1965 5
5. LOCATION: 18-24-03N 105-43-41E, UTM WF769345. Located on an unnumbered route near San Dinh, approximately 12 NM inland from the Gulf of Tonkin. 6
7
8
6. DESCRIPTION: Oriented NNW/SSE, with overall dimensions 140' x 11', probably a concrete deck type structure. The meandering Song Kiem has sharp banks in this area, with a water gap at the bridge site of approximately 80'. There are no ferries or craft apparent in the area. There is a small ford approximately 1 NM to the south. 9
10
11
12
13
14
7. SIGNIFICANCE: This road serves as a connector between Routes 82 and 1 and could be used to bypass a section of Route 1. 15
16
17
8. TARGET ENVIRONMENT: Terrain to the north, and in the immediate area of the bridge, is relatively flat with many small villages. Wetland rice cultivation predominates. Approximately 4 NM to the south, a rugged chain of hills reaches elevations up to 1300 ft. 18
19
20
21
22
9. DEFENSE ENVIRONMENT: No AAA is known to be in the vicinity of this target. The closest AAA defenses are 2 active sites (2 occupied 12.7mm positions and 4 occupied/1 unoccupied 14.5-37mm positions) at Ha Tinh, approximately 13 NM to the southeast. (DOI: 30 Jan, 17 March 1965) No ground force elements are known to be in this area. The target is covered by EW radar at Ha Tinh and also lies within the EW/HF radar capabilities of the Vinh complex. 23
24
25
26
27
28
29
30
10. DAMAGE OBJECTIVE: Interdiction of traffic between Routes 82 and 1. Damage criterion is destruction of at least one span. 31
32
33
11. EFFECT ON DRV: Destruction of this bridge would hinder the flow of traffic attempting to bypass Route 1 in the event of its interdiction. 34
35
36
12. RECUPERABILITY: As an immediate measure, essential traffic could be routed over the ford to the south. However, this would involve the use of an extremely low capacity road, probably no more than a trail, which would require extensive improvement before withstanding heavy traffic. Repair or reconstruction of the bridge would take from one to three months depending on span lengths and availability of materials. 37
38
39
40
41
42
43
13. COLLATERAL DAMAGE: Insignificant. 44

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Appendix A

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14. RECOMMENDED WEAPONS AND SORTIES:

a. In order to achieve the desired damage criterion, weapons/sorties required over target:

Weapon:	250# SNAKEYE	or	250# BOMB	or	500# DAMP	or	750# BOMB
	135/11		555/46		355/37		310/52

b. Weapons/sorties operationally required to achieve "over target" requirements shown above:

164/13	677/56	433/48	378/63
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15. PROBABILITY OF ACHIEVING DAMAGE CRITERION: 85%

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(Revised by 7th Note to Holders)

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TAB AX TO ANNEX B TO APPENDIX A

TARGET NO. 18.5



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(Reviewed by 6th N/H)

A-B-AX-1

Tab AX to Annex B
to Appendix A

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 18.5 1
2. BE NUMBER: 617 0022 2
3. IDENTIFICATION: Dien Chau Railroad Bridge over Song Bang 3
4
4. DATE OF INFORMATION: 18 January 1965 DATE OF TIS: 20 Dec 1965 5
6
5. LOCATION (Geographic and UTM Grid Coordinates): 18 58 7
20N/105 34 55E UTM 48Q WF 613978. Located on the Hanoi-Vinh 8
railroad 24 miles north of Vinh and 2 miles southwest of Dien 9
Chau. 10
6. DESCRIPTION: Oriented north/south. 330' x 20'. 3 spans, 11
steel through-truss construction, 2 concrete piers, concrete 12
abutments. 13
7. SIGNIFICANCE: This target is a major bridge located on 14
the only rail line between Hanoi and Vinh. 15
8. TARGET ENVIRONMENT: Target about 3 ft. above sea level 16
and 2.6 miles inland. Belt of sand dunes, 100 to 300 ft. wide, 17
along coast to west. Between dunes and target, wetland rice 18
fields mixed with areas of low scrub forest. Song Con Da 19
meanders West, East and Northeast of target. Large town 1.7 20
miles northeast of target (Dien Chau) and 3 large villages 21
between .5 and 1 mile northwest of target; elsewhere scattered 22
native settlements located in areas of scrub forest. 23
9. DEFENSE ENVIRONMENT: There is no military installation 24
in the vicinity of this target. The closest known military 25
area is approximately 16 NM to the west at AHN SON where the 26
324th Infantry Division, with a total strength estimated at 27
12,500, is located in the Song Ca river valley. There is no 28
known AAA or radar in the target area. 29
10. DAMAGE OBJECTIVE: Destruction of at least one span. 30
11. EFFECT ON DRV: Destruction of this target would stop 31
through rail transport about 24 miles north of Vinh. 32
12. RECUPERABILITY:
 - a. Line capacity: TD 9 (EWPD) 33
2900 ST/Day 34
 - b. Emergency facility: Pontoon bridging and inland 35
water craft would probably provide 36
wide capacity 1000 ST/Day. 37
 - c. Recuperability: Emergency construction cribbing 38
and piling would require 6 39
weeks - probable capacity 1500 40
ST/Day. Bridge construction 41
to pre-attack capacity 7 to 8 42
months. 43

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A-B-AX-2

Tab AX to
Annex B to
Appendix A

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13. COLLATERAL DAMAGE: Insignificant.

14. RECOMMENDED WEAPONS AND SORTIES:

a. In order to achieve the damage criterion
weapons/sorties required over target:

Weapon:	250#	500#	750#	1000#
	<u>SNAKEYE</u>	or <u>BOMB</u>	or <u>BOMB</u>	or <u>BOMB</u>
	150/13	275/31	180/30	125/42

b. Weapons/sorties operationally required to achieve
"over target" requirements shown above:

183/16	340/38	220/37	152/51
--------	--------	--------	--------

15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%

~~TOP SECRET~~

A-B-AX-3

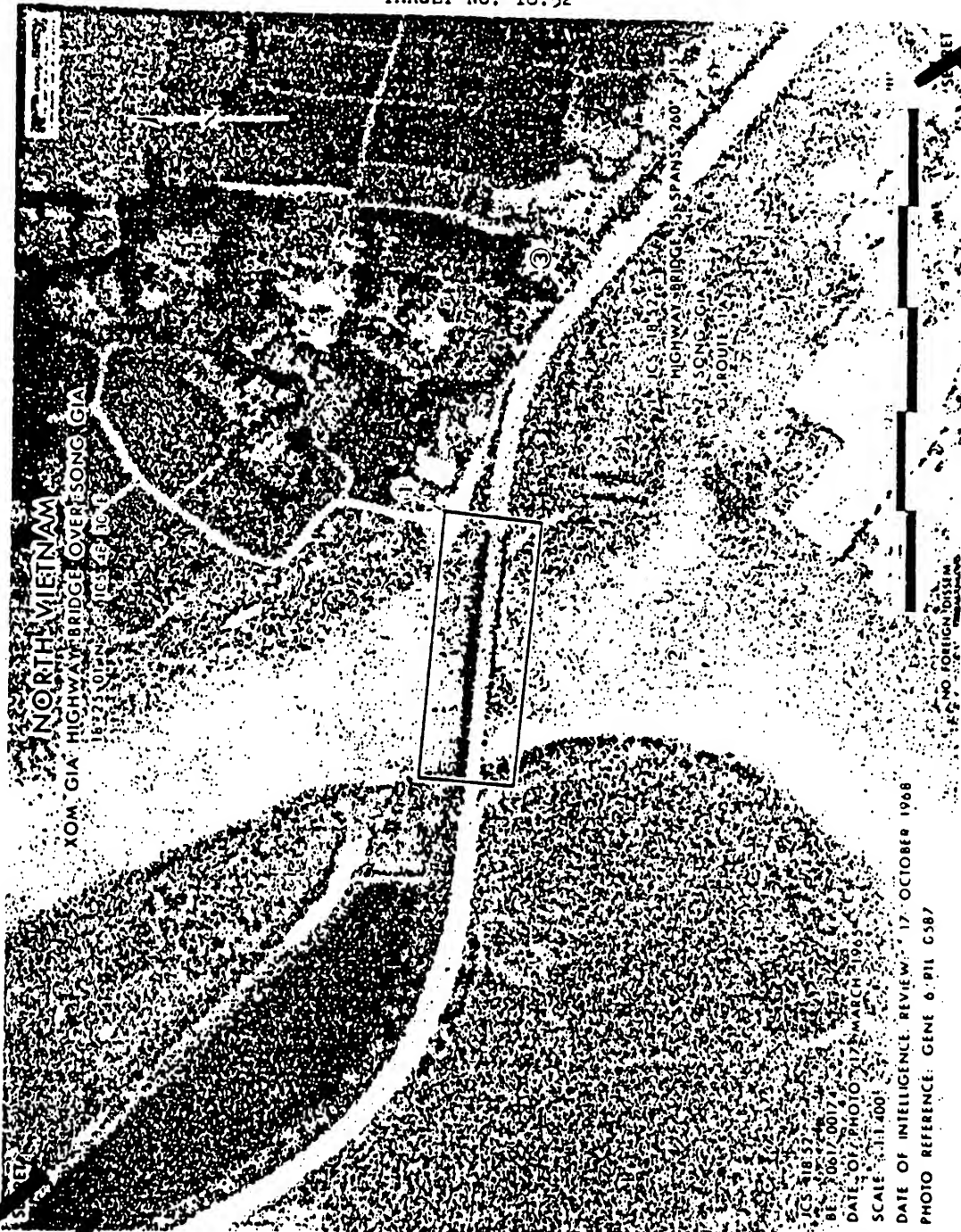
(Revised by 7th Note to Holders)

Tab AX to
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Appendix A

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TAB A2 TO ANNEX B TO APPENDIX A

TARGET NO. 18.52



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Revised by 17th N/H)

A-B-AZ-1

Tab A2 to Annex B
to Appendix A

DATE OF PHOTO: 17 MARCH 1965
SCALE: 1:11,400
DATE OF INTELLIGENCE REVIEW: 17 OCTOBER 1968
PHOTO REFERENCE: GENE 6 PTL C587

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 18.52 1
2. B.E. NUMBER: 617-0174 2
3. IDENTIFICATION: Xom Gia Hwy Br ov Song Gia 3
4. DATE OF INFORMATION: 8 July 1968 4
DATE OF TISD: 3 December 1968 5
DATE OF PHOTOGRAPHY: 17 March 1965 6
DATE OF INTELLIGENCE REVIEW: 17 October 1968 7
5. LOCATION: 18-25-01N 105-48-30E, located on National 8
Route 1A at Xom Gia, approximately 11 NM SE of Vinh. 9
6. DESCRIPTION: Oriented E/W with over-all dimensions 10
of 260' x 15', the bridge is a 5-span structure with one 11
long (140') half-through steel truss span and 4 probable 12
concrete beam, deck type spans. Pier support for the 13
long southern span is a boxed timber pile bent while the 14
remaining three piers are open ladder frame concrete bents. 15
The bridge was reported as in poor condition in 1961 but has 16
since been reconstructed. The bridge approaches are 17
elevated and embanked. Height of deck above water is 18
estimated at 40'. 19
7. SIGNIFICANCE: Bridge located on Route 1A, the 20
principal highway connection between Vinh and South 21
Vietnam. Route 12, which enters Laos through the Col de 22
Mu Gia, joins Route 1A at Ha Tinh. 23
8. TARGET ENVIRONMENT: The bridge lies in the low- 24
lying coastal flatlands, 8 NM inland from the Gulf 25
of Tonkin. The area is generally cultivated and lightly 26
populated in the vicinity of the bridge. 27
9. DEFENSE ENVIRONMENT: 28
 - a. The target is within the SAM envelope. 29
 - b. AAA activity has been identified within 3 NM 30
of the target. 31
 - c. HMM and small arms fire is anticipated. 32
10. DAMAGE OBJECTIVE: Interdiction of traffic from 33
Vinh into South Vietnam. Damage criterion is collapse 34
of at least one span and damage to adjacent ferry. 35
11. EFFECT ON NVN: Interdiction of this target would 36
hinder the flow of highway transport from Vinh into South 37
Vietnam along the coastal Route 1A, and also restrict 38
access to Laos via Route 12. 39

~~SECRET~~ NO FOREIGN DISSEM EXCLUDED FROM AUTOMATIC DOWNGRADING

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(Revised by 17th Note to Holders)

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Appendix A

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12. RECUPERABILITY: Immediate bypass of the bridge could be accomplished by way of Xom Gia Hwy Ferry (BE 617-2042) adjacent to the bridge and Xom Gia Hwy Ferry West (BE 617-5341) located 400 yards NW of the bridge. Recovery of limited traffic flow with a temporary timber section across a damaged 140-foot gap may take up to 3 weeks. Restoration of the bridge to its original capacity and condition could take up to 3 months.

13. COLLATERAL DAMAGE: None

14. RECOMMENDED WEAPONS AND SORTIES:

a. In order to achieve the desired damage criterion weapons/sorties required over target:

WEAPON	250#	500#	500#	750#			
	SNAKEYE	or	SNAKEYE	or	BOMB	or	BOMB
(260' x 15')	184/15		81/9		342/38		176/29

b. Weapons/sorties operationally required to achieve "over target" requirement shown above:

221/18	98/11	411/46	212/35
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15. PROBABILITY OF ACHIEVING DESIRED DAMAGE CRITERION: 85%

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A-B-AZ-3

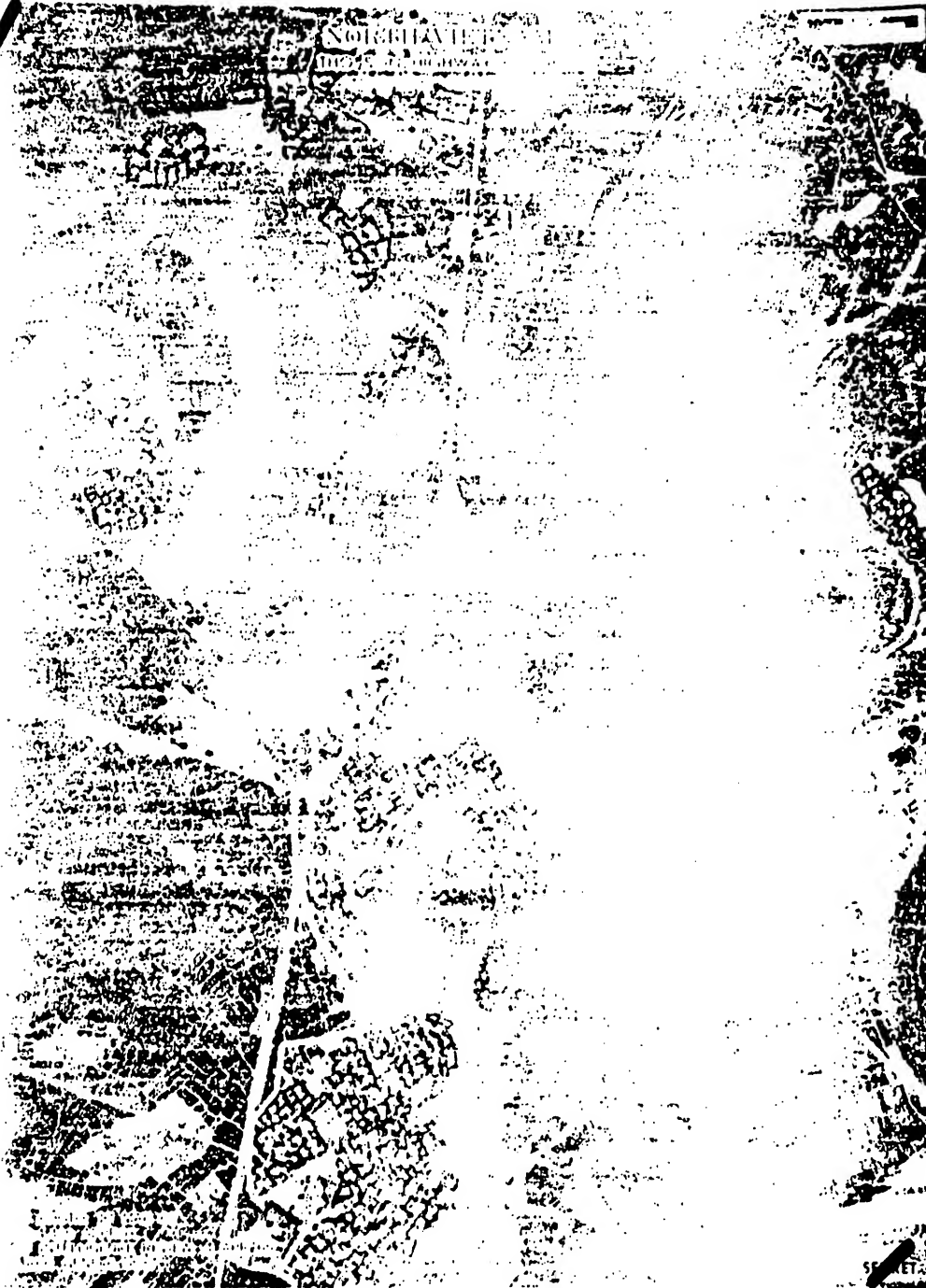
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TAB BA TO ANNEX B TO APPENDIX A

TARGET NO. 18.53



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Tab BA to Annex B
to Appendix A

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 18.53 1
2. BE NUMBER: 617-0971 2
3. IDENTIFICATION: Tho Son Hwy Bridge over Song Nhen 3
4. DATE OF INFORMATION: March 1965 DATE CT TIS: 14 April 1965 4
5. LOCATION: 18-27-22N 105-46-43E, UTM WF 822407. Located on National Route 1, at Tho Son. 5
6. DESCRIPTION: Oriented NNW/SSE; overall dimensions 360' x 121', deck type, probably concrete. Ford on eastern side of bridge. Over meandering stream, approximately 300' wide, with gently sloping banks. 6
7. SIGNIFICANCE: Bridge located on Route 1, the principal highway connection between Vinh and South Vietnam. Route 12, which enters Laos through the Col de Nu Gia, joins Route 1 at Ha Tinh, approximately 11 NM south of the bridge. 7
8. TARGET ENVIRONMENT: The road in the vicinity of the bridge site traverses a flat low-lying area 8 NM inland from the Gulf of Tonkin. A hilly area begins 3 NM to the north rising eventually to an elevation of 2200'. Area is generally cultivated with moderate population in the vicinity of the bridge. 8
9. DEFENSE ENVIRONMENT: 9
- a. No AAA defense is known to be in the immediate vicinity of this target. The closest AAA sites are at Ha Tinh 10 NM to the southeast, consisting of 2 active sites (2 occupied 12.7 positions and 4 occupied/1 unoccupied 14.5mm-37mm positions). Approximately 16 NM SE of the target is the Vinh military complex which has 15 active and 19 inactive AAA sites. (DOI: 30 Jan, 20 and 22 Feb, 17 and 19 March 1965) 10
- b. AW defense would be anticipated due to the strategic importance of Route 1 and the proximity of a reportedly regimental-size military element and Ha Tinh and the major military complex at Vinh. 11
- c. This target lies within the EW capability of Ha Tinh and the EW/HF radar at Vinh. 12
10. DAMAGE OBJECTIVE: Interdiction of highway traffic from Vinh into South Vietnam. Damage criterion is destruction of at least one span, and damage to adjacent ford. 13
11. EFFECT ON DRV: Interdiction of this target would hinder the flow of highway transport from Vinh into South Vietnam along the coastal Route 1, and also restrict access to Laos via Route 12. 14
12. RECUPERABILITY: The most likely immediate bypass measure would be the reactivation of the adjacent ferry site or installation of a pontoon bridge at the abandoned crossing 15

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A-B-BA-2

Tab BA to
Annex B to
Appendix A

~~TOP SECRET~~

site just east of the bridge as the stream does not appear to be currently fordable. Such a bypass could be completed in 2-3 days. It is estimated that the bridge can be returned to full prestrike capacity in 10 days to 2 weeks.

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13. COLLATERAL DAMAGE: Moderate

5

14. RECOMMENDED WEAPONS AND SORTIES:

6

a. In order to achieve the desired damage criterion, weapons/sorties required over target:

7
8

Weapon:	250# <u>SNAKEYE</u>	or	250# <u>BOMB</u>	or	500# <u>BOMB</u>	or	750# <u>BOMB</u>
	65/5		260/22		150/17		130/22

9

b. Weapons/sorties operationally required to achieve "over target" requirements shown above:

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11

79/6	317/27	183/21	159/27
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12

15. PROBABILITY OF ACHIEVING DAMAGE CRITERION: 85%

13

~~TOP SECRET~~

A-B-BA-3

Tab BA to
Annex D to
Appendix A

(Revised by 7th Note to Holders)

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TAB BB TO ANNEX B TO APPENDIX A

TARGET NO. 18.54



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(Revised 31 August 1965)

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Tab BB to
Annex B to
Appendix A

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 18.54 1
2. BE NUMBER: 617-0178 2
3. IDENTIFICATION: Ha Tinh Hwy Br over Song Nai 3
4. DATE OF INFORMATION: 23 June 1965 4
DATE OF TIS: 5 July 1966 5
DATE OF PHOTOGRAPHY: 14 May 1965 6
DATE OF INTELLIGENCE REVIEW: 11 June 1965 7
5. LOCATION: 18-19-07N 105-55-04E, UTM W3 970255. 8
Located on North Vietnam Route 1 approximately 2 NM 9
southeast of Ha Tinh. 10
6. DESCRIPTION: Oriented NW/SE with over-all dimensions 11
of 220 x 15 feet, the bridge was constructed in 1961 to 12
replace a ferry crossing still in serviceable condition and 13
located adjacent to the bridge. It is composed of a central 14
steel half-thru truss of 110 feet length supported by two 15
braced timber piers and two timber deck shore end sections 16
of three spans each and 55 feet length supported by smaller 17
timber bent piers. The decking is timber throughout and 18
the approaches are elevated. 19
7. SIGNIFICANCE: The bridge carries traffic on Route 1 20
between Vinh and Dong Hoi. Since the railroad is not in 21
operation south of Vinh, Route 1 is the primary overland 22
line of communication to the south of Vinh. 23
8. TARGET ENVIRONMENT: Target crosses the Song Nai (river) 24
about 1.3 NM southeast of Ha Tinh and lies in a low flat 25
coastal plain with elevations under 25 feet. The river is 26
about 200 feet wide at the bridge site. Rice fields are 27
predominant in the area with scattered patches of scrub. 28
Several small population centers are in the target area with 29
one located at the northwest shore. Bypass possible but 30
difficult by ferry about 2 NM NNE of the target. Off-road 31
movement is impossible due to diked road construction on 32
both sides of the target. 33
9. DEFENSE ENVIRONMENT: 34
 - a. No AAA is known to be in the immediate vicinity of 35
this target; however, Ha Tinh defenses consist of 2 36
active AAA sites (2 occupied 12.7mm positions and 4 37
occupied/1 unoccupied 14.5mm-37mm positions) and 1 38
inactive site (3 dismantled 14.5mm-37mm positions). 39
(DOI: 30 January and 17 March 1965). 40
 - b. It is anticipated that AW defense would be present 41
since reportedly there is up to a regiment located at 42
Ha Tinh. 43
 - c. Ha Tinh has EW radar and this target also falls 44
within the GCI capabilities of Vinh radar. 45
10. DAMAGE OBJECTIVE: Interdiction of traffic between 46
Vinh and Dong Hoi. Damage criterion is destruction of at 47
least one span. 48

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A-B-BB-2

Tab BB to
Annex B to
Appendix A

(Revised by 9th Note to Holders)

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11. EFFECT ON DRV: Should this target be interdicted, through highway traffic between Vinh and Dong Hoi would be interrupted; highway traffic could be rerouted over a longer route of lower capacity via Routes 12, 101, and 106 which joins Route 1 at Tho Dan.

12. RECUPERABILITY: Considering the current rate of activity by the DRV crews, immediate restoration of service by the installation of a ferry crossing may take at least 10 days. This includes rebuilding the approach road and ramps. Emergency reconstruction of northern bridge approach, abutment and span and repair of decking should take over three weeks. The estimate of restoration to original capacity is 4 to 6 weeks.

13. COLLATERAL DAMAGE:

a. Light damage to surrounding area

b. Population

Casualties*

Target Area		Adjacent Area		Target Area		Adjacent Area	
Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ
0	0	0	400	0	0	0	0

*Casualties estimated under daylight alert conditions.

14. RECOMMENDED WEAPONS AND SORTIES:

a. In order to achieve the desired damage criterion, weapons/sorties required over target:

WEAPON:	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	750# BOMB
	215/18		950/79		410/46		210/35

b. Weapons/sorties operationally required to achieve "over target" requirements shown above:

262/22	1159/96	500/56	256/43
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15. PROBABILITY OF ACHIEVING DAMAGE CRITERION: 85%

~~TOP SECRET~~

A-B-BB-3

(Revised by 9th Note to Holders)

Tab B3 to
Annex B to
Appendix A

TAB B-11 ANNEX F TO APPENDIX A

TARGET NO. 1000



~~SECRET~~

TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 18.58 1
2. BE NUMBER: 616-0665 2
3. IDENTIFICATION: Lang Dang Railroad Bridge over Song Thuong 3
4. DATE OF INFORMATION: 18 Sept 68 4
DATE OF TISD: 12 Nov 68 5
DATE OF PHOTOGRAPHY: 29 Aug 67 6
DATE OF INTELLIGENCE REVIEW: 26 Sept 68 7
5. LOCATION: 21-39-25N 106-35-22E, located on the Ha Noi-Dong Dang rail line, 16 NM S of Dong Dang, and 18 NM S of the Communist China border. 8
9
10
6. DESCRIPTION: Bridge, oriented ENE/WSW, is 126' long and 20' wide. It has a single steel through-truss span and concrete abutments. It has a single rail bypass bridge (616-4375). 11
12
13
7. SIGNIFICANCE: The central and shortest of the 3 relatively long bridges on the dual-gauge, Dong Dang-Kep portion of the Ha Noi-Dong Dang rail line. The only alternate rail connection between Ha Noi and Communist China is from Kun-ming, in China, through Lao Cai. 14
15
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17
8. TARGET ENVIRONMENT: Target, about 180' above sea level, is about 0.4 NM E of Lang Ro, in a narrow, NE/SW trending valley. Valley floor, about 0.7 NM wide, is mostly flat, cultivated in wetland rice. SE part of valley floor contains wooded hillocks; NW part contains a road, railroad, and stream. Valley paralleled on NW by steep-sided, wooded, karst hills. Hill crests 1,000' to 1,500' above sea level, about 1.5 NM SE of valley floor. NW side of ridge dissected by small, parallel, NW flowing streams. Hills extend SE from the ridge. 18
19
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9. DEFENSE ENVIRONMENT: 26
 - a. The target is within the SAM envelope 27
 - b. AAA activity has been identified within 3 NM of the target. 28
 - c. HMG and small arms fire is anticipated. 29
10. DAMAGE OBJECTIVE: Interdiction of traffic between Communist China and North Vietnam. Damage criterion is collapse of the span. 30
31
11. EFFECT ON NVN: Destruction of this bridge would halt rail traffic between Communist China and North Vietnam. 32
33
12. RECUPERABILITY: 34
 - a. Line capacity: 9 Trains each way/6100 ST S per day. 35
 - b. Emergency facility: Available circuitous highway routing would provide full throughput capacity after 3 days. 36
37

~~SECRET~~ NO FOREIGN DISSEM EXCLUDED FROM AUTOMATIC DOWNGRADING

(Revised by 15th Note to Holdern)

A-11-BF-2

TAB: BF
Annex: II
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13. COLLATERAL DAMAGE:

a. Insignificant

b. Population

Casualties*

Target Area		Adjacent Area		Target Area		Adjacent Area	
Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ
0	0	0	50	0	0	0	1

*Casualties estimated under daylight alert conditions.

14. RECOMMENDED WEAPONS AND SORTIES:

a. In order to achieve the desired damage criterion weapons/sorties required over target:

Weapon	250# <u>SNAKEYE</u>	500# <u>SNAKEYE</u>	500# <u>BOMB</u>	750# <u>BOMB</u>
(126' x 20')	343/29	147/16	633/70	310/52

b. Weapons/Sorties operationally required to achieve "over target" requirement shown above:

412/34	177/20	760/84	372/62
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15. PROBABILITY OF ACHIEVING DESIRED DAMAGE CRITERION:

85%.

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#18.58

(Revised by 15th Note to Holders)

A-B-RP-3

TAB BF to
Annex B to
Appendix A

~~TOP SECRET~~

TAB BG TO ANNEX B TO APPENDIX A

TARGET NO. 18.54



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(Revised by 11th N/H)

A-R-BG-1

TAB BG TO ANNEX B
TO APPENDIX A

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TARGET INFORMATION AND STRIKE DATA

1. <u>TARGET NUMBER:</u> 18.59	1
2. <u>BE NUMBER:</u> 616-0619	2
3. <u>IDENTIFICATION:</u> Long Khap Hwy Br ov Song Chay	3
4. <u>DATE OF INFORMATION:</u> 13 September 1966	4
<u>DATE OF TIS:</u> 19 September 1966	5
<u>DATE OF PHOTOGRAPHY:</u> 15 March 1964	6
<u>DATE OF INTELLIGENCE REVIEW:</u> 7 April 1965	7
5. <u>LOCATION:</u> 22-22-55N 104-20-18E, UTM VK 317750. Located on North Vietnam Route 4 approximately 25 air miles southeast of Lao Cai.	8 9
6. <u>DESCRIPTION:</u> The target is a 4-span high level reinforced concrete and steel bridge 45 feet above water level with solid concrete piers; overall dimensions 320 by 10 feet. The two center spans, one of which is a probable suspension span, are approximately 100 feet long and the shore spans are approximately 60 feet in length. The road is side hill cut for great distances on both sides of the bridge. There is no immediate bypass.	10 11 12 13 14 15
7. <u>SIGNIFICANCE:</u> This bridge provides vehicular passage on one of six through routes from South China to the Ha Noi area. Route 4 through this point is part of a road alternate to the major rail line following the Red River from the border crossing at Lao Cai to Ha Noi.	16 17 18 19
8. <u>TARGET ENVIRONMENT:</u> The target is situated in the valley of the Song Chay, oriented generally NW/SE, which parallels the Red River valley located to the west. The valley is flat to hilly and generally lightly cultivated and populated. The river banks are high and steep in the vicinity of the target.	20 21 22 23 24
9. <u>DEFENSE ENVIRONMENT:</u>	25
a. No SAM sites have been identified within SA-2 missile range (17.5 NM) of the target, nor have any been identified within a 30 NM radius.	26 27 28
b. No AAA defense activity has been identified in the vicinity of this target. The nearest activity is in the Tran An Phu area, 13 NM south.	29 30 31
c. Light small arms/machine gun fire from local militia or security forces could be encountered in this area.	32 33
10. <u>DAMAGE OBJECTIVE:</u> Interdiction of traffic between South China and Ha Noi. Damage criterion is destruction of at least one span.	34 35

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(Revised by 11th Note to Holders)

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Annex B to
Appendix A

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11. **EFFECT ON NVN:** In the event of interdiction of both the Lao Cai -
Ha Noi rail line and Route 4 leading to junction with Route 157, use of one of
the two major axes for supply from South China will be denied. It would limit
available rail/highway access to five through routes and would force temporary
concentration of supply movement to the northeast sector of the country.

12. **RECUPERABILITY:** The Song Chay is not fordable at this point and the
immediate recovery measure would probably be the installation of a ferry or
pontoon bridge which would require four days to a week to prepare approaches
and assemble equipment. Installation of a bailey type temporary span which
could be brought in from the Lao Cai railhead could be accomplished within
the same period of time. Reconstruction of the bridge to prestrike capacity
should require four to six weeks.

13. **COLLATERAL DAMAGE:**

a. Insignificant

b. Population

Casualties*

Target Area		Adjacent Area		Target Area		Adjacent Area	
Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ
0	0	0	50	0	0	0	1

*Casualties estimated under daylight alert conditions

14. **RECOMMENDED WEAPONS AND SORTIES:**

a. In order to achieve the desired damage criterion, weapons/sorties
required over target:

WEAPON	250# SNAKEYE	250# BOMB	500# BOMB	750# BOMB
(320x10)	420/35	700/59	320/36	180/30

b. Weapons/sorties operationally required to achieve "over target"
requirement shown above:

512/43	854/72	390/44	220/37
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15. **PROBABILITY OF ACHIEVING DESIRED DAMAGE CRITERION:** 85%

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(Revised by 11th Note to Holders)

Tab BG to
Annex B to
Appendix A

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TAB BH TO ANNEX B TO APPENDIX A

TARGET NO. 18.6



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Tab BH to Annex B
to Appendix A

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TARGET INFORMATION AND STRIKE DATA

1. <u>TARGET NUMBER:</u>	18.6	1
2. <u>BE NUMBER:</u>	617-0023	2
3. <u>IDENTIFICATION:</u>	Tam Da Railroad and Highway Bridge over Song Cua Lo	3
4. <u>DATE OF INFORMATION:</u>	18 January 1965	5
	DATE OF TIS: 27 February 1965	6
5. <u>LOCATION:</u>	18-50-54N/105-39-15E, UTM WP 690839. Located 13 miles north of Vinh on the Hanoi-Vinh railroad and on National Route 1.	7 8 9
6. <u>DESCRIPTION:</u>	Oriented north/south. 380 feet long by 18 feet wide, 3 spans, steel through-truss construction, 2 concrete piers and concrete abutments. The approaches are embanked earth. The deck is covered by concrete for vehicular traffic.	10 11 12 13 14
7. <u>SIGNIFICANCE:</u>	Located on the only rail line between Hanoi and Vinh. This target controls rail and highway traffic between the junction of Routes 7 and 1 vicinity Phu Dien Chau and the junction of Routes 8 and 1 at Vinh.	15 16 17 18
8. <u>TARGET ENVIRONMENT:</u>	The bridge is located 13 miles north of Vinh and lies in the low-lying coastal flatlands. The stream is navigable throughout the year and has gently sloping banks. The area immediately surrounding the site is marshy and unpopulated.	19 20 21 22 23
9. <u>DEFENSE ENVIRONMENT:</u>		24
a. No known AAA is located in the target vicinity. Nearest AAA site is approximately 2 NM SE and reported dismantled. Vinh area AAA defenses extend over an area 7-14 NM south of the target.		25 26 27 28
b. There are 3 confirmed early warning and 3 confirmed fire control radars in the Vinh area.		29 30
10. <u>DAMAGE OBJECTIVE:</u>	Interdiction of traffic. Damage criterion is destruction of at least one span.	31 32
11. <u>EFFECT ON DRV:</u>	Interruption of this target would halt rail traffic short of the terminus at Vinh. It would also reduce highway traffic to this area, and hamper supply ship- ments destined for Laos over Routes 8 and 15/12. Rerouting of traffic over an inland detour of approximately 60 miles over lower capacity routes would be required.	33 34 35 36 37 38
12. <u>RECUPERABILITY:</u>		39
a. Line capacity:	TD 9 (EWPD) 1500 ST/Day	40 41
b. Emergency facility:	Inland water craft (alternate ferry crossing 500 feet down- stream) 500 ST/Day.	42 43 44

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A-B-BH 2

Tab BH to
Annex B to
Appendix A

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c. Recuperability:

Emergency reconstruction
cribbing and piling would
require an estimated 6 weeks
to allow 750 ST/Day. Recon-
struction to pre-attack capa-
city would require 7 months.

13. COLLATERAL DAMAGE: Insignificant.

14. RECOMMENDED WEAPONS AND SORTIES:

a. In order to achieve the desired damage criterion,
weapons/sorties required over target:

Weapon:	250#	250#	500#	750#
	<u>SNAKEYE</u>	or <u>BOMB</u>	<u>BOMB</u>	or <u>BOMB</u>
	148/12	575/48	255/28	270/45

b. Weapons/sorties operationally required to achieve
"over target" requirements shown above:

181/15	705/59	312/34	330/35
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15. PROBABILITY OF ACHIEVING DAMAGE CRITERION: 85%

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A-B-EH-3

Tab EH to
Annex B to
Appendix A

(Revised by 7th Note to Holders)

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TARGET NO. 18.6:



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(Revised 31 August 1965)

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Tab B. to
Annex E to
Appendix A

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 18161 1
2. DE NUMBER: 016-0218 2
3. IDENTIFICATION: Lac Can Bay Bridge Song Cau 3
4. DATE OF INFORMATION: 14 June 1966 4
DATE OF INFO: 20 June 1966 5
DATE OF INFORMATION: 21 June 1966 6
DATE OF INFORMATION REVIEW: 2 July 1966 7
5. LOCATION: 23-09-00N 105-50-38E, UTM W 570477. 8
Located in North Vietnam Route 3 just east of the confluence 9
of the Song Ma and Song Cau and 2 NM northeast of Lac Can. 10
The Lac Can A/P lies just east of the target. 11
6. DESCRIPTION: Oriented NE/SW with overall dimensions 12
of 250 x 10 feet; the bridge is a five span structure; south 13
long span double Howe half-truss type; mid stream turn- 14
out span concrete deck type with probable concrete 5 pier 15
support system; remaining 3 spans probably concrete deck- 16
type, with concrete piers. The center span has a 25 foot 17
wide parking section. An abandoned ferry crossing in fair 18
condition is located approximately 500 feet to the east of 19
the bridge. 20
7. SIGNIFICANCE: The target is located on Route 3 which 21
connects Hanoi with Route 4 at Cao Bang and thus provides 22
access to central North Vietnam from Kwangai province, China. 23
Should this target be interdicted, traffic between Cao Bang 24
and Hanoi could be continued over the longer alternate route 25
via Route 4 to Lang Son and Route 1A to Hanoi. 26
8. TARGET ENVIRONMENT: The target is located about 3/4 NM 27
east of the confluence of the Song Ma and Song Cau (river) 28
and lies on a N/S trending section of plain 200-500 yards 29
wide that extends north several miles and south to the Song 30
Cau where it turns abruptly E and W along the river broadening 31
to 400 to 500 yards wide. The plains are surrounded by 32
hills which dominate target area, north of the Song Cau, 33
steep hills with 950 feet local relief and maximum elevations 34
up to 1500 feet predominate; south of the Song Cau slopes are 35
more gentle. The hills are generally scrub and forest 36
covered; rice-fields cover plains. The river is possibly 37
fordable during the low water season (October - April). 38
9. DEFENSE ENVIRONMENT: 39
 - a. No SAM sites have been identified within SA-2 missile 40
range (17.5 NM) of this target; however, 3 sites are 18-30 41
NM distant. 42
 - b. No AAA defenses have been identified in this area. 43
 - c. No military units are known to be in this area; how- 44
ever, light AW/small arms fire would be anticipated from 45
local militia elements. 46
10. DAMAGE OBJECTIVE: Interdiction of traffic between Thai 47
Nguyen and Cao Bang. Damage criterion is collapse of at least 48
one span. 49
11. EFFECT ON NVN: Interdiction of this bridge would inter- 50
rupt traffic on Route 3 between Thai Nguyen and Cao Bang. 51

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(Revised by 8th Note to Holders)

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Appendix A

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12. RECUPERABILITY: The most likely immediate bypass measure would be to reactivate the abandoned ferry site which could be accomplished within one week; the delay depending upon the availability of ferrying equipment. Construction of a ford at the site could be accomplished within one week to ten days. Replacement of a destroyed span with limited capacity temporary timber trestle and deck span could be accomplished in one to two weeks. Reconstruction of the span to pre-strike capacity would require from six to eight weeks.

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13. COLLATERAL DAMAGE: Insignificant.

10

14. RECOMMENDED WEAPONS AND SORTIES:

11

a. In order to achieve the desired damage criterion, weapons/sorties required over target:

12
13

WEAPON:	250# <u>SNAKEYE</u>	or	250# <u>BULLPUP</u>	or	500# <u>BOMB</u>	or	750# <u>BOMB</u>	
	90/8		50/25		249/27		190/32	14

b. Weapons/sorties operationally required to achieve "over target" requirements shown above:

15
16

110/9	61/31	293/33	232/39	17
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15. PROBABILITY OF ACHIEVING DESIRED DAMAGE CRITERION: 85% 18

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Tab BB to
Annex B to
Appendix A

(Revised by 8th Note to Holders)

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TAB BJ TO ANNEX B TO APPENDIX A

TARGET NO. 18.62



~~TOP SECRET~~

(Classified by 10 N/H)

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Tab BJ to Annex B
to Appendix A

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 18.62 1
2. RE NUMBER: 616-0823 2
3. IDENTIFICATION: Lang Luong Hwy Br ov Song Mo Ga 3
4. DATE OF INFORMATION: 14 June 1966 4
DATE OF TIS: 20 June 1966 5
DATE OF PHOTOGRAPHY: 17 March 1965 6
DATE OF INTELLIGENCE REVIEW: 5 April 1965 7
5. LOCATION: 21-44-50N 106-04-16E UTM 48Q XK 108050. 8
Located on North Vietnam Route 1B approximately 17 NM north- 9
east of Thai Nguyen. 10
6. DESCRIPTION: Oriented E/W, the bridge is a three-span 11
structure with over-all dimensions of 125' x 10'. The two 12
western spans are of probable continuous steel half-thru 13
truss construction having lengths of 70 ft. and 30 ft. from 14
west to east respectively. The eastern span is a 30 ft prob- 15
able concrete deck type. The piers are of light concrete 16
design. A prepared stone ford has been installed just north 17
of the bridge. 18
7. SIGNIFICANCE: The target lies on Route 1B, an alter- 19
nate to Route 1, and controls traffic between Dong Dang and 20
Thai Nguyen. 21
8. TARGET ENVIRONMENT: The target lies in the valley of 22
the Song Mo Ga which is relatively broad and flat at the 23
target site. The flood plain at the target site is oriented 24
NE/SW and is approximately 1300 yards wide. The valley is 25
confined to the north by a regular cliff rising abruptly 26
1300 feet above the valley floor to an elevation of approxi- 27
mately 1800 feet. The southern valley wall is 28
irregular. Peak elevations in the area rise to 2700 feet. 29
Vegetative cover in the valley consists of cultivation and 30
light tree cover. The confining ridges and hills are heavily 31
forested. Population is confined to scattered farm houses 32
and villages. 33
9. DEFENSE ENVIRONMENT: 34
 - a. Two SAM sites have been identified within SA-2 missile 35
range (17.5 NM) and 12 sites are 18-30 NM distant. 36
 - b. No AAA defenses are known to be in the area of this 37
target. 38
 - c. It is anticipated that some AW-small arms fire from 39
local militia would be encountered in this area. 40
10. DAMAGE OBJECTIVE: Destruction of at least one span. 41
11. EFFECT ON NVN: Interdiction of the target would elimi- 42
nate the use of Route 1B as an alternate to Route 1 and as a 43
through route from support bases in Kwangsi Province, China to 44
Hanoi. 45
12. RECUPERABILITY: Although stream characteristics at the 46
site are not available, it is estimated that it is at least 47
seasonally fordable. In such a case, the most likely immedi- 48
ate bypass measure would be the installation of a ford which 49
could require three to four days. Should the bridge be 50
destroyed during the high water season, a bypass ferry or 51

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Annex B to
Appendix A

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pontoon bridge could be installed within a week. Recon-
struction of the bridge to pre-strike capacity would require
from four to six weeks.

13. COLLATERAL DAMAGE: None.

14. RECOMMENDED WEAPONS AND SORTIES:

a. In order to achieve the desired damage criterion,
weapons/sorties required over target:

WEAPON	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	750# BOMB
	285/24		1250/105		600/67		355/60

b. Weapons/sorties operationally required to achieve
"over target" requirements shown above:

348/29	1524/128	732/82	433/73
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15. PROBABILITY OF ACHIEVING DAMAGE CRITERION: 85%

~~TOP SECRET~~

A-B-BJ-3

Tab BJ to
Annex B to
Appendix A

(Revised by 8th Note to Holders)

~~TOP SECRET~~

TAB BK TO ANNEX B TO APPENDIX A

TARGET NO. 19.63



~~TOP SECRET~~

ANNEX-1

Tab BK to Annex
to Appendix A

~~TOP SECRET~~

~~TOP SECRET~~

TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 18.63 1
2. BE NUMBER: 616-0750 2
3. IDENTIFICATION: Vinh Tuy Highway Bridge over Song Con 3
4. DATE OF INFORMATION: May 1963 4
DATE OF TIS: 13 April 1965 5
5. LOCATION: 22-16-08N/104-53-40E, UTM 48Q VK 893624. 6
Location on North Vietnam National Route 2 approximately 7
12 NM SE of Lang Cai. 8
6. DESCRIPTION: Bridge oriented NW/SE, has been repaired 9
since 1961 with a 4-span superstructure now apparently con- 10
sisting of a combination of 2 concrete deck-type end spans 11
and 2 center spans of steel half through truss construction. 12
Overall dimensions approximately 380 ft x 11 ft. Ferry site 13
on North side of bridge has provided vehicular bypass during 14
a long period of dis-repair of the original bridge. Banks 15
of the 300 ft wide Song Con moderately sloping but near- 16
vertical bluffs found in places. 17
7. SIGNIFICANCE: This bridge controls traffic on National 18
Route 2 between the population centers of Ha Giang and Tuyen 19
Quang. This route is the principal highway between southern 20
Yunnan Province, China and north central North Vietnam. The 21
most immediate alternate line of communication would be the 22
Lao Kay - Hanoi railroad. 23
8. TARGET ENVIRONMENT: Target is located on Song Con at 24
confluence with Riviere Claire. Terrain in area consists of 25
forested, rolling to steep, highly dissected hills and rolling 26
plains. Wetfield rice cultivation in stream valleys 27
scattered throughout area. Conditions for off-road movement, 28
poor to fair. Bypass via ferry at Vinh Tuy located on north 29
side of target. 30
9. DEFENSE ENVIRONMENT: There are no known AAA defenses 31
located in the target vicinity. Generally, the area lies 32
within the EW capability of Thai Nguyen, Trai Ngau and Son 33
La radar installations. 34
10. DAMAGE OBJECTIVE: Destruction of at least one span and 35
damage to adjacent ferry site. 36
11. EFFECT ON DRV: Interdiction of this target would 37
hinder highway transport between South China and north 38
central North Vietnam. 39
12. RECUPERABILITY: Lack of previous measures to repair 40
bridge to full capacity and existing alternate means of 41
crossing diminishes significance of the target itself. If 42
effectively interdicted at one of the two central spans, the 43
bridge should not be repairable in less than three weeks. 44
Temporary field bridging may supplement ferry operations 45
within one week. 46

~~TOP SECRET~~

A-B-BK-2

Tab BK to
Annex B to
Appendix A

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13. COLLATERAL DAMAGE: Insignificant.

14. RECOMMENDED WEAPONS AND SORTIES:

a. In order to achieve the desired damage criterion,
weapons/sorties required over target:

Weapon: 250# or 250# 500# 750#
SNAKEYE or BOMB or BOMB or BOMB

160/14 700/59 310/35 175/30

b. Weapons/sorties operationally required to achieve
"over target" requirements shown above:

195/17 854/72 378/43 213/37

15. PROBABILITY OF ACHIEVING DAMAGE CRITERION: 85%.

~~TOP SECRET~~

A-B-BK-3

Tab BK to
Annex B to
Appendix A

~~TOP SECRET~~

TAB BL TO ANNEX B TO APPENDIX A

TARGET NO. 18.64



~~TOP SECRET~~

A-B-BL-1

Tab BL to Annex
to Appendix A

~~TOP SECRET~~

~~TOP SECRET~~

TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 18.64 1
2. BE NUMBER: 616-0227 2
3. IDENTIFICATION: Ban Pa Huone Highway Bridge over Nam Meuk 3
4
4. DATE OF INFORMATION: February 1965 5
DATE OF TIS: 16 April 1965 6
5. LOCATION: 21-48-10N/103-18-28E, UTM 48Q UK 249117. 7
Located on North Vietnam Local Route 148 approximately 25 NM 8
south of Lai Chau. 9
6. DESCRIPTION: Bridge, oriented NW/SE, is a half through 10
reinforced simple steel truss structure with an estimated 11
4 spans; overall dimensions estimated 220 ft x 10 ft; 12
vertical clearance unlimited; height of deck at least 20 ft 13
above water; concrete piers and abutments. There is a pre- 14
pared ford 60 yards downstream which is known to be suitable 15
for military vehicles. The swiftly flowing Nam Meuk is about 16
150 feet wide at the target site, and has steep banks that in 17
many places coincide with valley walls that reach heights of 18
more than 2,000 feet. 19
7. SIGNIFICANCE: This target lies on the only road in 20
North Vietnam linking Routes 4 and 6. Route 148 extends 21
north of Lai Chau into Yunnan Province in China, thus pro- 22
viding the principal access route west of the Red River 23
between China and Dien Bien Phu area in North Vietnam. 24
8. TARGET ENVIRONMENT: Target crosses the Nam Meuk 25
(river) about 1.2 NM NW of Ban Pa Huone. It lies in rugged 26
mountains that reach a height of 4,000 feet. Vegetation 27
throughout the area consists of scrub and forest. The only 28
feasible avenue for movement is a road which parallels the 29
streams that leads to the target. Approaches to the bridge 30
located on side hill cut in the steep valley walls. 31
9. DEFENSE ENVIRONMENT: There are no known AAA defenses 32
located in the target vicinity. Generally, this area lies 33
within the EW capability of Dien Bien Phu and Son La radar 34
installations. 35
10. DAMAGE OBJECTIVE: Destruction of at least one span, 36
and damage to the approach roads. 37
11. EFFECT ON DRV: Should this target be interdicted, 38
traffic from Route 4 into north central Vietnam would be 39
forced to detour a long distance through northern Laos, 40
causing considerable delay. 41
12. RECUPERABILITY: Restoration requirements for this 42
bridge in case of interdiction are diminished by existence 43
of an active prepared ford adjacent to the bridge. Repair 44
of bridge may be considered unnecessary until height of 45
next wet season. 46

~~TOP SECRET~~

A-B-BL-2

Tab BL to
Annex B to
Appendix A

~~TOP SECRET~~

~~TOP SECRET~~

13. COLLATERAL DAMAGE: Insignificant.

14. RECOMMENDED WEAPONS AND SORTIES:

a. In order to achieve the desired damage criterion,
weapons/sorties required over target:

Weapon: 250# or 250# or 500# or 750#
SNAKEYE or BOMB or BOMB or BOMB
210/19 950/79 450/50 250/42

b. Weapons/Sorties operationally required to achieve
"over target" requirements shown above:

232/23 1160/96 550/61 350/52

15. PROBABILITY OF ACHIEVING DAMAGE CRITERION: 85%.

~~TOP SECRET~~

A-B-BL-3

Tab BL to
Annex B to
Appendix A

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TAB BM TO ANNEX B TO APPENDIX A

TARGET NO. - 18.65



~~SECRET~~

(Revised by 14th N/H)

A-B-BM-1

Tab BM To Annex B
To Appendix A

~~SECRET~~

TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 18.65 1
2. BE NUMBER: 616-0076 2
3. IDENTIFICATION: On Hwy Br Ov Song Thuong 3
4. DATE OF INFORMATION: 7 November 1967 4
DATE OF TIS: 26 April 1968 5
DATE OF PHOTOGRAPHY: 18 October 1967 6
DATE OF INTELLIGENCE REVIEW: 28 March 1968 7
5. LOCATION: 21-39-18N 106-35-05E. Located on North Vietnam local Route 187 approximately 19 NM SW of Lang Son and 2 NM NE of Than Moi at village of Lang Ro. 8
9
10
6. DESCRIPTION: Bridge, oriented NW/SE, last reported as a timber trestle structure over 200 feet in length and with a 15-foot roadway. Target has at least 6 trestle bents having span lengths under 35 feet. The Song Thuong is approximately 50 yards wide near the target; the banks are low to moderately sloping. There are two available bypasses NE of the bridge, including one 75 foot ford and a smaller bridge/causeway. 11
12
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7. SIGNIFICANCE: Target is on a fair weather road which could serve as a bypass to Route 1A, in the event of interdiction of a nearby bridge on Route 1A, BE Number 616-0665. Route 1A links Kwangsi Province in South China, with Ha Noi. 18
19
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8. TARGET ENVIRONMENT: The target is located near junction with Highway 1, northeast of Thanh Moi, in the flat Song Thuong (river) valley, which ranges from 400 to 1,000 yards wide in the target area. The valley is flanked on both sides by forested, rugged, karst hills that rise up to 1,200 feet above adjacent valley floors. Most of the valley is under wetfield rice cultivation. Off-road vehicular movement is restricted by steep slopes, sink-holes and miry soils. 22
23
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29
9. DEFENSE ENVIRONMENT: 30
 - a. The target is not within the SAM envelope. 31
 - b. AAA activity has been identified within 3 NM of the target. 32
33
 - c. HMO and SA fire is not anticipated. 34
10. DAMAGE OBJECTIVE: Interdiction of hwy traffic between South China and Ha Noi. Damage criterion is destruction of at least one span. 35
36
37
11. EFFECT ON NVN: Interdiction of this target would hinder use of local Route 187 as an alternate to Route 1A and delay highway traffic between South China and Ha Noi. 38
39
40
12. RECUPERABILITY: Stream characteristics at the bridge site appear favorable for easy crossing and the simple timber construction of a damaged single span should be restorable or replaceable within 3 days with locally available materials. 41
42
43
44

~~SECRET~~ NO FOREIGN DISSEM EXCLUDED FROM AUTOMATIC DOWNGRADING

A-B-BM-2
(REVISED BY 14TH NOTE TO HOLDERS)

Tab BM to
Annex B to
Appendix A

~~SECRET~~

13. COLLATERAL DAMAGE:

a. Insignificant

b. Population

Casualties*

Target Area Adjacent Area

Target Area Adjacent Area

Mil Civ Mil Civ

Mil Civ Mil Civ

0

0

0

30

0

0

0

3

* Casualties estimated under daylight alert conditions

14. RECOMMENDED WEAPONS AND SORTIES:

a. In order to achieve the desired damage criterion, weapons/sorties required over target:

WEAPON	500# SNAKEYE	750# BOMB
(200 x 15)	43/5	130/22

b. Weapons/sorties operationally required to achieve "over target" requirement shown above:

52/6

156/21

15. PROBABILITY OF ACHIEVING DESIRED DAMAGE CRITERION: 85%

~~SECRET~~

A-B-BM-3
(REVISED BY 14TH NOTE TO HOLDERS)

Tab RM to
Annex E to
Appendix A

~~SECRET~~

TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 18.66
2. BE NUMBER: 616-0816
3. IDENTIFICATION: Me Xa Hwy Br Ov Song Ky
4. DATE OF INFORMATION: 28 November 1965
DATE OF TIS: 26 April 1968
DATE OF PHOTOGRAPHY: 21 July 1965
DATE OF INTELLIGENCE REVIEW: 28 March 1968
5. LOCATION: 21-04-22N 106-32-16E. Located on North Vietnam Route 18 approximately 17 NM northwest of Hai Phong.
6. DESCRIPTION: Oriented E/W, the bridge is a 5-span steel half through truss structure with a timber deck; over-all dimensions 225 x 10 feet. Both approaches consist of embankments extending into the river channel, the western embankment being approximately 100 feet long and the eastern embankment of greater length.
7. SIGNIFICANCE: This target is located on a leg of the easternmost through route from South China to Ha Noi. It provides truckable passage on Route 18 which serves also as an alternate to Route 5 linking the Hai Phong Port Complex and Ha Noi. This route has been utilized as an access to and from the coal mining regions in and around Hon Cai.
8. TARGET ENVIRONMENT: The target crosses the Song Ky, a tributary of the Song Da Bach, and lies on the low-lying, flat coastal plain dissected by an extensive system of canals and rivers and their tributaries. Route 18 is built on an embankment for several miles on either side of the target denying off road movement. A large portion of the surrounding terrain is intermittently submerged; that part, which is not, is cultivated. Population density is light and confined to villages scattered throughout the plain.
9. DEFENSE ENVIRONMENT:
 - a. The target is within the SAM envelope.
 - b. AAA activity has been identified within 3 NM of the target.
 - c. HMG and SA fire is anticipated.
10. DAMAGE OBJECTIVE: Interdiction of traffic on Route 18. Damage criterion is collapse of at least one span.
11. EFFECT ON NVN: Interdiction of this target would severely restrict use of alternate communications between Ha Noi and Hai Phong. It in turn would cut off direct traffic to the coal and mineral resources in the northeast coastal area free of ferry crossing restrictions. Current low capacity access via the South China coastal route and Mon Cai also would be drastically reduced for possibly over one week.

~~SECRET~~ NO FOREIGN DISSEM EXCLUDED FROM AUTOMATIC DOWNGRADING

A-B-BN-2

(REVISED FY 14TH NOTE TO HOLDERS)

Tab 7N to
Annex B to
Appendix A

~~SECRET~~

12. RECUPERABILITY: Immediate measures to be taken in the event of interdiction would probably be to reactivate ferry service at an old site just south of the bridge. Local shipping could be pressed into the ferrying operation which would require up to three days to effect. Installation of a pontoon or timber bridge is possible and could be accomplished within five days to a week by utilizing materials from the Hai Phong area. Reconstruction of the bridge to pre strike capacity should require from four to six weeks.

13. COLLATERAL DAMAGE:

a. Insignificant

b. Population

Casualties*

Target Area		Adjacent Area		Target Area		Adjacent Area	
Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ
0	0	0	130	0	0	0	9

* Casualties estimated under daylight alert conditions.

14. RECOMMENDED WEAPONS AND SORTIES:

a. In order to achieve the desired damage criterion, weapons/sorties required over target:

WEAPON:	500#	750#
	<u>SNAKEYE</u>	<u>BOMB</u>
(225 x 10)	250/42	100/11

b. Weapons/sorties operationally required to achieve "over target" requirements shown above:

300/50	120/13
--------	--------

15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 85%

~~SECRET~~

A-B-BN-3

(REVISED BY 14TH NOTE TO HOLDERS)

Tab RN to
Annex B to
Appendix A

~~TOP SECRET~~

TAB BO TO ANNEX B TO APPENDIX A

TARGET NO. 18. 67



~~TOP SECRET~~
(Revised by 11th N/H)

A-B-RO-1

TAB BO TO ANNEX B TO APPENDIX A

~~TOP SECRET~~

TARGET INFORMATION AND STRIKE DATA

1. **TARGET NUMBER:** 18.67 1
2. **BE NUMBER:** 615-0286 2
3. **IDENTIFICATION:** Chong Chang Hwy Br ov Song Luc Nam 3
4. **DATE OF INFORMATION:** 13 September 1966 4
DATE OF TIS: 21 September 1966 5
DATE OF PHOTOGRAPHY: 30 December 1964 6
DATE OF INTELLIGENCE REVIEW: 5 April 1965 7
5. **LOCATION:** 21-32-00N 107-04-48E, UTM YJ 154822. Located on 8
North Vietnam Route 175 (13B) approximately 2 NM southwest of the junction 9
with Route 4 at Dinh Lap. 10
6. **DESCRIPTION:** Oriented NE/SW with overall dimensions of 144 by 8 11
feet, the bridge is a single lane steel girder bridge with concrete deck 12
approximately 55 feet above water level. Bypass is difficult. 13
7. **SIGNIFICANCE:** The target controls traffic on Route 175 (13B) 14
between Dinh Lap and Bac Giang, a potential alternate to Route 1A, the 15
primary LOC between Kwangsi Province, China and Ha Noi. 16
8. **TARGET ENVIRONMENT:** The target is situated in the narrow Song 17
Luc-Nam valley. The surrounding terrain consists of irregular limestone 18
hills and ridges separated by numerous small stream valleys. Peak 19
elevations rise to 1500 feet in the vicinity of the target. The stream valley 20
in the target area is alternately wooded and cultivated; the higher hills and 21
ridges are wooded and cultivated. Population density is sparse and confined 22
to widely scattered farm houses and villages. 23
9. **DEFENSE ENVIRONMENT:** 24
 - a. No SAM sites have been identified within SA-2 missile range 25
(17.5 NM) of this target; however, 2 missile sites are 18-30 NM distant. 26
 - b. No AAA defense activity has been identified in the area of this 27
target. 28
 - c. Very light small arms/machine gun fire from local militia could 29
be encountered in this area. 30
10. **DAMAGE OBJECTIVE:** Interdiction of traffic on Route 175. Damage 31
criterion is the destruction of the bridge. 32
11. **EFFECT ON NVN:** Interdiction of this target would interrupt traffic 33
between Dinh Lap and Bac Giang and decrease the utility of Route 175 (13B) 34
as an alternate to Route 1A. 35

~~TOP SECRET~~

A-B-B0-2

(Revised by 11th Note to Holders)

Tab B0 to
Annex B to
Appendix A

~~TOP SECRET~~

12. RECUPERABILITY: Stream characteristics are not available. However, it is likely that the stream is seasonally fordable and probably fordable the year round. A ford could be installed within one week to ten days. A temporary trestle replacement bridge of limited capacity could be installed utilizing local materials within one to two weeks. Replacement with a bridge with full pre-strike capacity would require from four to six weeks.

13. COLLATERAL DAMAGE:

a. None

b. Population Casualties*

Target Area		Adjacent Area		Target Area		Adjacent Area	
Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ
0	0	0	0	0	0	0	0

*Casualties estimated under daylight alert conditions

14. RECOMMENDED WEAPONS AND SORTIES:

a. In order to achieve the desired damage criterion, weapons/sorties required over the target:

WEAPON	250# SNAKEYE	or 250# BOMB	or 500# BOMB	or 750# BOMB
(144x8)	145/13	600/50	395/44	330/55

b. Weapons/sorties operationally required to achieve "over target" requirement shown above:

177/15	732/61	482/54	402/67
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15. PROBABILITY OF ACHIEVING DESIRED DAMAGE CRITERION: 85%

~~TOP SECRET~~

A-B-B0-3

(Revised by 11th Note to Holders)

Tab B0 to
Annex B to
Appendix A

TAB BOB TO ANNEX B TO APPENDIX A

TARGET NO. 18760



SECRET

(CLASSIFIED BY 15TH N/H)

A-B-BOB-1

Tab B to Annex B to Appendix A

Good

~~SECRET~~

TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 18.69 1
2. B.E. NUMBER: 617-0633 2
3. IDENTIFICATION: La Khe Thon Railroad Bridge over Ngan Sau 3
4. DATE OF INFORMATION: 21 August 1968 4
DATE OF TISD: 5 November 1968 5
DATE OF PHOTOGRAPHY: 3 April 1965 6
DATE OF INTELLIGENCE REVIEW: 27 August 1968 7
5. LOCATION: 18-03-51N/105-49-20E, located on the Xom Hoai-Ma Thuong light-capacity railway, 31 NM S of Vinh. 8
9
6. DESCRIPTION: The bridge, oriented WNW/ESE, is 420' long and 120' wide. It has a steel half-through-truss span on each end and 2 steel beam spans in the center, supported on trestle piers. 10
11
12
7. SIGNIFICANCE: One of the longer bridges on the 54 NM long, light-capacity rail line, S of Vinh. This line, operated by flanged-wheel trucks and small railroad cars, permits relatively large loads (33 ST) to be propelled by a single truck. 13
14
15
16
8. TARGET ENVIRONMENT: Target, about 120 ft. above sea level, is 0.7 NM SSE of La Khe Thon. Target crosses Ngan Sau (stream) in NW-SE trending valley 0.3 NM wide; valley narrows to about 200 ft. width 5 NM SE of target, and widens to 2 NM, 4 NM NW of target. Ngan Sau, entrenched in cultivated valley floor, has high, steep banks. Two small, forested pinnacles rise 200 ft. above the nearly flat valley bottom 0.4 NM NW of target. Valley bordered by steep, forested hills with peaks ranging from 700 to 1200 ft. above sea level NE of valley, and 1000 to 1600 ft. above sea level SW of valley. 17
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9. DEFENSE ENVIRONMENT: 26
 - a. The target is within the SAM envelope. 27
 - b. AAA activity has been identified within 3 NM of the target. 28
 - c. HMO and small arms fire is anticipated. 29
10. DAMAGE OBJECTIVE: Interdiction of flanged-wheel truck traffic between Xom Hoai and Ma Thuong. Damage criterion is collapse of either half-through-truss end-span or the two-center spans and trestle piers. 30
31
32
33
11. EFFECT ON NVN: Destruction of this bridge would hamper movement southward by flange-wheel truck railway, requiring shuttling across the barrier and placing a greater burden on parallel highway routes. 34
35
36
37

~~SECRET~~ NO FOREIGN DISSEM EXCLUDED FROM AUTOMATIC DOWNGRADING

A-11-1104-2

(Revised by 15th Note to Holdorn)

TAN BOTTO
Annex B to
Appendix A

~~SECRET~~

12. RECUPERABILITY:

a. Line capacity: (Estimated) 3 "Trains"/100 ST south per day.

b. Emergency facility: Conventional truck shuttle could provide full capacity within 1-3 days. The nearby highway bridge could be converted for rail use in 1-2 weeks.

c. Bridge reconstruction: Emergency reconstruction to full capacity would probably require about a week.

13. COLLATERAL DAMAGE:

a. Insignificant.

b. Population

Casualties*

Target Area Adjacent Area Target Area Adjacent Area

Mil Civ Mil Civ Mil Civ Mil Civ

0 0 0 150 0 0 0 2

*Casualties estimated under daylight alert conditions.

14. RECOMMENDED WEAPONS AND SORTIES:

a. In order to achieve the desired damage criterion, weapons/sorties required over target:

WEAPON	250# SNAKEYE	500# or SNAKEYE	500# or BOMB	750# or BOMB
	134/11	58/6	237/26	118/20

b. Weapons/sorties operationally required to achieve "over target" requirements shown above:

161/13	70/8	285/32	142/24
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15. PROBABILITY OF ACHIEVING DESIRED DAMAGE CRITERION: 85%

~~SECRET~~

A-11-100h-3

(Revised by 15th Note to Holdern)

#18.69

TAB 10 to
Annex B to
Appendix A

TAB. BP. TO-ANNEX E TO APPENDIX A

TARGET NO. 14.7



Red by P. H. H. H.

A-B-PP-1

~~SECRET~~

TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 18.7 1
2. B. E. NUMBER: 617-0024 2
3. IDENTIFICATION: Qui Vinh Railroad Br ov Song Hoang Mai. 3
4. DATE OF INFORMATION: 17 September 1968 4
DATE OF TISD: 11 December 1968 5
DATE OF PHOTOGRAPHY: 20 December 1964 6
DATE OF INTELLIGENCE REVIEW: 16 October 1968 7
5. LOCATION: 19-15-45N 105-41-20E, located on the Ha Noi-Vinh rail line, about 0.7 NM W of Qui Vinh, 43 NM N of Vinh. 8
9
10
6. DESCRIPTION: Bridge, oriented ENE/WSW, is 352' long and 22' wide. It has 2 steel through-truss spans, a concrete pier, and concrete abutments. There are 3 rail bypass bridges (617-1501, -1973, and -3681). 11
12
13
14
7. SIGNIFICANCE: This bridge is an important link on the southern part of the Ha Noi-Vinh rail line, between Thanh Hoa and Vinh. 15
16
17
8. TARGET ENVIRONMENT: Target, over Song Hoang Mai about 4.5 NM from coast, is about 20' above sea level. Target area consists of relatively flat rice cultivated plain broken by many low hills rising to as high as 400' above sea level less than one NM S of target. Two small hills rise to about 200' just W of target. A triangular shaped lake, 0.5 NM long, is located 1.2 NM N of the target. A ridge extending NW from the lake reaches over 1,000' about 3.2 NM N-NW of the target. Railroad extends NE and SW from target. National Route No. 1 extends N-S about 1.5 NM E of target. 18
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9. DEFENSE ENVIRONMENT: 29
 - a. The target is within the SAM envelope. 30
 - b. AAA activity has been identified within 3 NM of the target. 31
32
 - c. HMG and small arms fire is anticipated. 33
10. DAMAGE OBJECTIVE: Interdiction of rail traffic between Ha Noi and Vinh, S of Thanh Hoa. Damage criterion is the collapse of at least one span. 34
35
36
11. EFFECT ON NVN: Destruction of this bridge would prevent through rail traffic S of Thanh Hoa. 37
38

~~SECRET~~ NO FOREIGN DISSEM EXCLUDED FROM AUTOMATIC DOWNGRADING

(Revised by 15th Noto to Haldorn)
A-B-HP-2

WAB BRo
Annex Bto
Appendix A

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12. RECUPERABILITY:

a. Line capacity: 9 Trains/3500 ST each way per day.

b. Emergency facility: Highway shuttle via ferry or pontoon bridge would provide capacity of 1000-2000 ST/Day after 5 days and full capacity after about a week.

c. Bridge reconstruction: Emergency bridge restoration to full capacity would require 4 to 5 weeks. Complete restoration to pre-attack status would require 4 to 5 months.

13. COLLATERAL DAMAGE: None

14. RECOMMENDED WEAPONS AND SORTIES:

a. In order to achieve the desired damage criterion 13 weapons/sorties required over target:

WEAPON	250# SNAKEYE	500# SNAKEYE	500# BOMB	750# BOMB
(352'x22')	147/12	62/7	259/29	125/21

b. Weapons/sorties operationally required to achieve "over target" requirement shown above:

177/15	75/8	311/35	150/25
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15. PROBABILITY OF ACHIEVING DESIRED DAMAGE CRITERION: 85%.

~~SECRET~~

2

#18.7

(Revised by 15th Note to Holders)

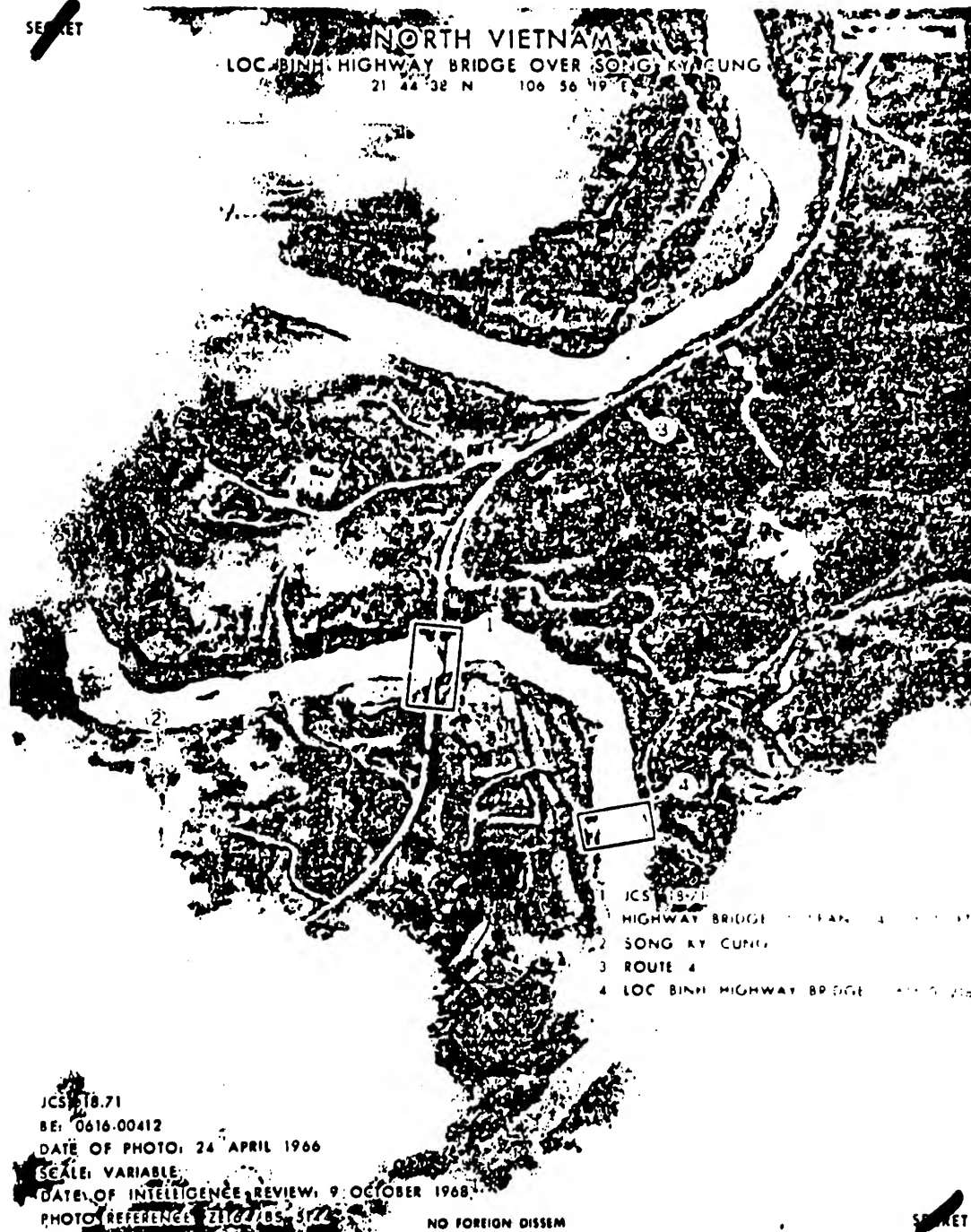
A-B-BP-3

TAB BP to
Annex B to
Appendix A

TAB BPa TO ANNEX B TO APPENDIX A

TARGET NO. 18.71

~~SECRET~~



~~SECRET~~

Classified by 17th N/II)

A-B-BPa-1

~~SECRET~~
Tab BPa to Annex B
to Appendix A

~~SECRET~~

TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 18.71 1
2. BE NUMBER: 616-0412 2
3. IDENTIFICATION: Loc Binh Hwy Br ov Song Ky Cung 3
4. DATE OF INFORMATION: 28 October 1968 4
DATE OF TISD: 3 December 1968 5
DATE OF PHOTOGRAPHY: 24 April 1966 6
DATE OF INTELLIGENCE REVIEW: 9 October 1968 7
5. LOCATION: 21-44-38N 106-56-19E, located on North 8
Vietnam Route 4 approximately 12.5 NM SE of Lang Son. 9
6. DESCRIPTION: Oriented NW/SE with overall dimension 10
of 410' x 10', the bridge is a 5-span structure on solid 11
concrete piers. The east-central span is a 190' steel 12
half-through truss; the 2 adjacent spans to the NW are con- 13
crete deck-type with lengths of 77'; the end spans are short 14
concrete deck-type with lengths of 33'. The Loc Binh 15
highway bridge #2 (BE No. 616-0219) is located approximate- 16
ly 355 yards to the NW. The roadway is elevated for 17
approximately 500' at both approaches. 18
7. SIGNIFICANCE: The target lies on Route 4, the only 19
route linking Lang Son with the northern North Vietnam 20
coast at Tien Yen and provides access to points along the 21
coast E and S. The target also controls a possible al- 22
ternate route to the Lang Son - Ha Noi supply route via 23
Route 13B from Dinh Lap to Bac Giang. Should this target 24
be interdicted, traffic between the coast and Lang Son 25
would be interrupted. 26
8. TARGET ENVIRONMENT: Bridge crosses SW-flowing, 225' 27
wide Song Ky Cung (river) at Po Loi, approximately 2,400 28
yards SE of Loc Binh. Banks of meandering Song Ky Cung 29
are steep throughout most of target area, except along 30
the 800 yard stretch of N bank immediately E of target. 31
Terrain in target area mostly rugged harst hills, except 32
to the W where high hills and low mountains, rising up 33
to 1,000' above adjacent valleys, predominate. Rice is 34
cultivated mainly in southern karstic hills and along Song 35
Ky Cung floodplain.
9. DEFENSE ENVIRONMENT: 27
 - a. The target is not within the SAM envelope. 28
 - b. AAA activity has not been identified within 29
3 NM of the target. 30
 - c. HMG and small arms fire is not anticipated. 31
10. DAMAGE OBJECTIVE: Interdiction of traffic between 32
Lang Son and the NVN northern coast. Damage criterion is 33
destruction of at least one span, particularly the 190' 34
steel half thru truss span. 35

~~SECRET~~ NO FOREIGN DISSEM EXCLUDED FROM AUTOMATIC DOWNGRADING

A-B-BPa-2

(Revised by 17th Note to Holders)

Tab BPa to
Annex B to
Appendix A

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11. EFFECT ON NVN: Destruction of this Bridge will initially interrupt and subsequently delay traffic on Route 4 along the China border between its junctions with Routes 1A and 13B at Lang Son and Dinh Lap respectively.
12. RECUPERABILITY: Immediate bypass could be accomplished by the use of the Zipper Bridge (BE No. 616-0219) and also a seasonal ferry/ford (BE No. 0616-03689) located 200 yards S of the bridge. Temporary restoration of the long steel half thru truss span by lower capacity timber deck and trestling could be accomplished in 15 to 20 days. Reconstruction of the span to full pre-strike capacity would require from 6 to 8 weeks depending upon availability of materials.
13. COLLATERAL DAMAGE:
- a. None
- b. Population Casualties*
- | Target Area | Adjacent Area | Target Area | Adjacent Area |
|-------------|---------------|-------------|---------------|
| Mil | Civ | Mil | Civ |
| 0 | 0 | 30 | 0 |
- *Casualties estimated under daylight alert conditions
14. RECOMMENDED WEAPONS AND SORTIES:
- a. In order to achieve the desired damage criterion weapons/sorties required over target:
- | WEAPON | 250# SNAKEYE | 500# SNAKEYE | 500# BOMB | 750# BOMB |
|--------------|--------------|--------------|-----------|-----------|
| (410' x 10') | 141/12 | 65/7 | 266/30 | 150/25 |
- b. Weapons/sorties operationally required to achieve "over target" requirements shown above:
- | | | | |
|--------|------|--------|--------|
| 170/14 | 78/9 | 320/36 | 180/30 |
|--------|------|--------|--------|
15. PROBABILITY OF ACHIEVING DESIRED DAMAGE CRITERION:
- 85%

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A-B-BPa-3

(Revised by 17th Note to Holders)

Tab BPa to
Annex B to
Appendix A

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TAB BPh TO ANNEX B TO APPENDIX A

TARGET NO. 18.78



*JCS 18.78

RE 0016 01233

DATE OF PHOTO: 20 JULY 1963

SCHEMATIC: 11/7/63

DATE OF INTELLIGENCE REVIEW: 10 SEPTEMBER 1963

PHOTO REF: TCM 11/7/63

NO FOREIGN DISSEM

~~TOP SECRET~~
(Reviewed by 11th N/H)

A-R-BPh-1

For FPH to Annex B
to Appendix A

243

~~TOP SECRET~~

TARGET INFORMATION AND STRIKE DATA

- ~~1. NAME: 18.78~~
~~2. NAME: 18.78~~
~~3. NAME: 18.78~~
4. DATE OF INFORMATION: 13 September 1966
DATE OF TIS: 5 October 1966
DATE OF PHOTOGRAPHY: 20 July 1965
DATE OF INTELLIGENCE REVIEW: 10 September 1965
5. LOCATION: 21-21-36N-106-32-15E, UTM XJ 594625. Located on North Vietnam Route 13B, 42 NM ENE of Ha Noi.
6. DESCRIPTION: Oriented NE/SW, the bridge is a three-span probable concrete deck type structure on concrete piers with overall dimensions of 125 ft. x 16 ft. The bridge approaches are slightly elevated above the surrounding terrain. An abandoned ford with approaches in poor condition is situated approximately 400 ft. south of the bridge.
7. SIGNIFICANCE: This bridge is one of two selected targets (JCS 18.67 and 18.78) on Route 13B, the nearest alternate road via Route 4 to the Lang Son - Ha Noi rail line and Route 1A, the principal highway LOC in northeast North Vietnam. Route 13B in combination with the section of Route 4 from Lang Son to Dinh Lap could accommodate slightly over half of the capacity of Route 1A between Lang Son and Ha Noi.
8. TARGET ENVIRONMENT: The target is situated in a broad, gently rolling alluvial plain extending approximately 10 NM to the northeast. The plain broadens and becomes flatter as it merges with the Red River Delta to the southwest. The surrounding land is extensively cultivated with dryland crops on the higher areas and wetland rice in numerous reclaimed stream beds dissecting the area and producing a distinctive irregular cultivation pattern. The village of Lam is located 1.5 NM SSW of the bridge and the remaining population in the area is confined to small, widely separated agricultural hamlets. The stream over which the bridge passes joins the meandering Song Luc Nam 0.5 NM SW of the bridge.
9. DEFENSE ENVIRONMENT:
- a. Ten SAM sites have been identified within SA-2 missile range (17.5 NM) of the target, and 21 additional SAM sites have been identified 18-30 NM distant.
- b. No AAA defenses have been identified in the immediate vicinity of the target. A 6-position inactive 37mm sight has been identified approximately 2.5 NM north in the Dong Giao area.
- c. Moderate EMG and small arms fire is anticipated, due to the presence of several barracks in the vicinity.
10. DAMAGE OBJECTIVE: Interdiction of traffic on Route 13B. Damage criterion is destruction of at least one span.
11. EFFECT ON NVN: Interdiction of this bridge will interrupt through traffic on Route 13B and create a bottleneck until the bridge is restored. The use of this route as an alternate to Route 1A would be temporarily denied.

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A-B-BPh-2

(Revised by 11th Note to Holders)

Tab BPh to
Annex B to
Appendix A

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12. RECUPERABILITY: Immediate low capacity bypass of the bridge could be accomplished over the nearby abandoned ford which could be improved to a limited serviceable status in one to two days. Preparation of a permanent ford could require up to a week. Installation of a temporary ford could require up to a week. Installation of a temporary timber deck type section of estimated 40 ft. length could be accomplished within one week. Reconstruction of a destroyed span to pre-strike capacity would require six to eight weeks.

13. COLLATERAL DAMAGE:

a. None

b. Population

Casualties*

Target Area				Adjacent Area			
Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ
0	0	0	0	0	0	0	0

*Casualties estimated under daylight alert conditions.

14. RECOMMENDED WEAPONS AND SORTIES:

a. In order to achieve the desired damage criterion, weapons/sorties required over target:

WEAPON	250# SNAKEYE	or	500# BOMB	or	750# BOMB	or	1000# BOMB
(125x16)	130/11		350/39		270/45		245/82

b. Weapons/sorties operationally required to achieve "over target" requirement shown above:

159/14	427/48	329/55	299/100
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15. PROBABILITY OF ACHIEVING DAMAGE CRITERION: 85%

~~TOP SECRET~~

A-E-BPh-3

(Revised by 11th Note to Holders)

Tab BPh to
Annex B to
Appendix A



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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 18.74 1
2. BE NUMBER: 616-1150 2
3. IDENTIFICATION: Vu Chua Railroad Bridge South over
Suci Ngang 3
4
4. DATE OF INFORMATION: 14 July 1966 DATE OF TIS: 5
20 June 1966 6
5. LOCATION: 21-26-35N 106-21-28E, UTM XJ 406716 7
6. DESCRIPTION: Oriented NE/SW. 99' long by 11' wide,
carries a meter gage, single track railroad line. The
structure has two steel thru truss spans with concrete piers
and abutments. 8
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7. SIGNIFICANCE: Located on the only rail line between
Hanoi and Pinghsiang, Kwangsi Province, China. This line is
the most important rail link between North Vietnam and China
and provides the only railroad connection with the standard-
gage Chinese railroad system. All military support moved
by rail from eastern China and the USSR must move over this
line and across the bridge. 12
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8. TARGET ENVIRONMENT: Target bridge, about 65 ft. above
sea level, is about 15 statute miles NE of Bac Giang; it
crosses east bank tributary of N-S oriented Song Thuong within
300 ft. of main stream. Target area on dissected plain,
oriented NE-SW, with many small, wooded knobby hills separated
by low areas planted to wetland rice. E and S of target are
wooded hills and hill ridges 350 to 1250 ft. above sea level,
trending NE-SW; N and W of target, wooded hills 350 to 1100 ft.
above sea level, RR approaches target site from NE, continues
NE beyond area. Principal road oriented N-S, about 4 miles
W of target site. 0.8 miles SW of target site, Song Thuong
turns west to intersect principal road. 19
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9. DEFENSE ENVIRONMENT: 31
 - a. Thirteen SAM sites have been identified within SA-2
missile range (17.5NM) of the target, and 11 additional
SAM sites have been identified 18-30 NM distant. 32
33
43
 - b. Identified AAA activity in the Vu Chua area con-
sists of 2 inactive 37-mm sites. The nearest active
AAA defense is in the Kep (25 active sites) area 45NM SW.
(DOI: 15 October 1965 - 8 June 1966) 35
36
37
38
 - c. Sparse HMG and small arms fire is anticipated from
local militia. 39
40
10. DAMAGE OBJECTIVE: Interdiction of traffic between
Hanoi and Communist China. Damage criterion is collapse of
at least one span. 41
42
43
11. EFFECT ON NVN: Interdiction of this target will halt
through rail traffic between Hanoi and Kwangsi Province, China. 44
45

~~TOP SECRET~~

A-B-BPd-2

Tab BPd to
Annex B to
Appendix A

(Revised by 2h Note to Holder)

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12. RECUPERABILITY:

a. Estimated maximum line capacity:

TD 9 (EWPD)
1700 ST/Day
3300 ST/Day (if additional locomotives were
available)

b. Emergency facility:

Emergency ferry facility and/or pontoon bridging
(for vehicular shuttle over the river) would
permit about 700 ST/Day throughput capacity after
7-10 days.

c. Bridge reconstruction:

Emergency bridge restoration (semi-permanent
construction) would permit 1700 ST/Day throughput
capacity after 4-6 weeks. Bridge reconstruction
to pre-attack status 2-4 months.

13. COLLATERAL DAMAGE: Insignificant

14. RECOMMENDED WEAPONS AND SORTIES:

a. In order to achieve the desired damage objective,
weapons/sorties required over target:

Weapon:	250#	500#	250#	1,000#	750#
	<u>SNAKEYE</u>	or <u>SNAKEYE</u>	or <u>BULLPUP</u>	or <u>BULLPUP</u>	or <u>BOMB</u>
	175/15	110/12	60/30	30/15	400/67

b. Weapons/sorties operationally required to achieve
"over target" requirements shown above:

213/18	134/15	73/37	37/19	488/81
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15. PROBABILITY OF ACHIEVING DESIRED DAMAGE CRITERION: 85%

~~TOP SECRET~~

A-B-BPd-3

Tab BPd to
Annex B to
Appendix A

(Revised by 7th Note to Holdérs)

1. AN APPENDIX TO ANNEX B TO APPENDIX A

TARGET NO. 18,73



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A-B-BPc-1

1. AN APPENDIX TO ANNEX B TO APPENDIX A
2. AN APPENDIX TO ANNEX B TO APPENDIX A

~~TOP SECRET~~

TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 18.75 1
2. BE NUMBER: 616-1159 2
3. IDENTIFICATION: Lang Met Hwy Br ov Song Thuong 3
4. DATE OF INFORMATION: 14 July 1966 DATE OF TIS 4
20 June 1966 5
5. LOCATION: 21-30-21N 106-21-08E, UTM XJ 401787. 6
Located on North Vietnam route 1A, 40 NM NE of Hanoi. 7
6. DESCRIPTION: Oriented ENE/WSW with overall dimensions of 8
236' x 141', the bridge is a six span steel truss (possibly 9
continuous) and concrete deck structure with prob. concrete 10
piers and abutments. The four central spans are of steel truss 11
construction with lengths of approximately 48 feet; two short 12
concrete deck spans of approximately 22-foot length at the 13
shore ends complete the structure. The bridge capacity is 14
estimated at 15 tons. The bridge was built after 1962 to 15
replace a ferry bottleneck installed to bypass a bridge 16
destroyed earlier, probably during the Indo-China conflict. 17
The ferry ramps, located just north of the bridge, appear to 18
be in serviceable condition but would require some improvement 19
for extensive use. 20
7. SIGNIFICANCE: The bridge lies on route 1A, the princi- 21
pal highway LOC in north-eastern North Vietnam. The bridge 22
controls traffic between Kep and Lang Son where Route 1A could 23
be used as an alternate to the rail line which closely follows 24
it from Lang Song to Hanoi. Interdiction of this bridge will 25
interrupt the highway traffic initially and create a bottle- 26
neck when the ferry is reactivated. 27
8. TARGET ENVIRONMENT: This target is situated in a foot- 28
hill region of the Northern edge of the Tonkin delta in which 29
Hanoi is centered. Hills rise to the north from 600' within 30
1/2 mile of the target to over 1500' at a distance of 3 miles. 31
The Song Thuong meanders at this location but cuts a clear 32
channel from the Northeast and past the target site. It 33
appears navigable to river craft. The bridge site is partially 34
surrounded on the western bank by moderately populated town 35
of Lang Met and leads to an industrial installation off the 36
eastern end. Although the river banks near the site have a 37
gradual slope, the inactive ferry approaches appear partially 38
eroded from weathering. 39
9. DEFENSE ENVIRONMENT: 40
 - a. Twelve SAM sites have been identified within SA-2 41
missile range (17.5 NM) of the target, and 11 additional 42
SAM sites have been identified 18-30 NM distant. 43
 - b. No AAA activity has been identified in the immediate 44
vicinity of the target. The nearest active AAA defenses 45
are in the Kep area (25 active sites) 7 NM to the SSW. 46
(DOI: 15 October 1965 - 8 June 1966). However, there are 47
2 inactive 37-mm sites in the Vu Chua area, 2.5 NM SSE. 48
 - c. Sparse HMG and small arms fire is anticipated from 49
local militia. 50

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A-B-BPe-2

Tab BPe to
Annex B to
Appendix A

(Revised by 9th Note to Holders)

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10. DAMAGE OBJECTIVE: Interdiction of traffic between 1
Lang Son, Dong Dang and Southern China. Damage criterion is 2
destruction of at least one of the four steel truss spans. 3

11. EFFECT ON DRV: Loss of this bridge crossing would 4
cause significant reduction in through capacity on the most 5
important road access from Southern China via Lang Son and 6
Dong Dang. This route would be heavily depended on as an 7
alternate means for movement of cargo in event the nearby 8
Hanoi - North East rail line were to be rendered unserviceable. 9

12. RECUPERABILITY: Immediate bypass can be accomplished 10
over the adjacent ferry site as soon as ferry equipment is 11
obtained. The recovery period for the bridge itself depends 12
upon the number of spans destroyed and the amount of damage 13
inflicted upon the remaining spans. One of the 48-foot truss 14
spans could be replaced temporarily by a timber deck and 15
trestle section of limited capacity within one week. Recon- 16
struction of a destroyed span to full capacity would depend 17
upon the availability of structural steel but could be accom- 18
plished in four to six weeks. 19

13. COLLATERAL DAMAGE: Insignificant. 20

14. RECOMMENDED WEAPONS AND SORTIES: 21

a. In order to achieve the desired damage objective, 22
weapons/sorties required over target: 23

Weapon:	1000#	250#	500#	750#	
	<u>BULLPUP</u>	or <u>SNAKEYE</u>	or <u>SNAKEYE</u>	or <u>BOMB</u>	
	32/16	800/67	350/39	330/63	24

b. Weapons/sorties operationally required to achieve 25
"over target" requirements shown above: 26

39/20	976/82	427/47	463/77	27
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15. PROBABILITY OF ACHIEVING DESIRED DAMAGE CRITERION: 85%

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A-B-BPe-3

Tab BPe to
Annex B to
Appendix A

(Revised by 7th Note to Holders)

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NORTHEASTERN

100A CHANN/HIGHWAY BRIDGE OVER STEAK

[illegible]

195 1H 20

01614-0028

DATE OF PHOTO

DATE 1/6/70

DATE OF INFO

PHOTO B11-C

SECRET

NO FOREIGN DISSEM

TOP SECRET

$$A = B = BP; \bullet :$$

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 18.76 1
2. BE NUMBER: 615-0283 2
3. IDENTIFICATION: Ha Chanh Hwy Br ov Stream 3
4. DATE OF INFORMATION: 14 June 1966 DATE OF TIS: 4
20 June 1966 5
5. LOCATION: 21-07-24N 107-21-05E, UTM YJ 440374. 6
Located on North Vietnam Route 18, approximately 8 NM NNE 7
of Cam Pha Port. 8
6. DESCRIPTION: Oriented NNW/SSE, this bridge has overall 9
dimensions of 185' x 12' with probable 3 concrete deck type 10
spans. Details on substructure and vertical clearance un- 11
known. No alternate crossing available in the immediate 12
vicinity of the target. 13
7. SIGNIFICANCE: This target forms one of the critical 14
structures on Route 18 which provides access along the North- 15
east coast from Route 4 near the Chinese border to Hanoi 16
via mining and port activities at Cam Pha and Hon Gai. 17
8. TARGET ENVIRONMENT: This target is situated in a 18
hilly coastal area bordered on the west by mountains reaching 19
over 2000' and on the east by marine swamp. The local region 20
is lightly populated with the nearest village, Khe Lan, 21
approximately 1 NM to the south. The terrain surrounding 22
the target is undeveloped and the stream appears unfordable 23
at the bridge site. 24
9. DEFENSE ENVIRONMENT: 25
 - a. No SAM sites have been identified within SA-2 26
missile range of this target. Two missile sites are 27
18-30 NM distant. 28
 - b. The nearest identified AAA defenses are located in 29
the Cam Pha area, approximately 7NM south, where 5 in- 30
active sites have been reported. 31
 - c. No military units are known to be in this area; 32
however, some machine gun/small arms fire from local 33
militia guarding the Route 18 bridges would be antici- 34
pated. 35
10. DAMAGE OBJECTIVE: Interdiction of traffic from Com- 36
munist China to the Hon Gai - Cam Pha Area. Damage criterion 37
is destruction of at least one span. 38
11. EFFECT ON NVN: Effective interdiction at this location 39
would deny direct road access from China to the Hon Gai - 40
Cam Pha coal mining district as well as an important secondary 41
access to the Hanoi - Haiphong complex. 42

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A-B-BPf-2

Tab BPF to
Annex B to
Appendix A

(Revised by 8th Note to Holders.)

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12. RECUPERABILITY: Assuming non-availability of portable tactical bridging equipment, initial restoration of service would most likely be undertaken by erection of a low level timber trestle crossing adjacent to the original bridge site. This could be accomplished in less than ten days with locally available materials. Deliberate permanent repairs with in-place concrete casting may take up to 3 months depending on extent of damage to piers and abutments.

13. COLLATERAL DAMAGE: Insignificant

14. RECOMMENDED WEAPONS AND SORTIES:

a. In order to achieve the desired damage criterion, weapons/sorties required over target:

Weapon:	250#	500#	250#	1000#	750#	
	<u>SNAKEYE</u>	or <u>SNAKEYE</u>	or <u>BULLPUP</u>	or <u>BULLPUP</u>	or <u>BOMB</u>	
	95/8	60/7	45/23	23/12	205/34	13

b. Weapons/sorties operationally required to achieve "over target" requirements shown above:

116/10	73/8	55/28	28/14	250/42	16
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15. PROBABILITY OF ACHIEVING DESIRED DAMAGE CRITERION: 85% 17

~~TOP SECRET~~

A-B-BPf-3

Tab BPF to
Annex B to
Appendix A

(Added - 5 January 1966)

~~TOP SECRET~~

PAR BP2 TO ANNEX B TO APPENDIX A

TARGET NO. 18 77



TOP SECRET
Declassified by 506 NCH

SECRET

SECRET

TARGET INFORMATION AND STRIKE DATA

1. <u>TARGET NUMBER:</u> 18.77	1
2. <u>BE NUMBER:</u> 615-0350	2
3. <u>IDENTIFICATION:</u> Ha Chanh Hwy Br N ov Stream	3
4. <u>DATE OF INFORMATION:</u> 14 July 1966	4
<u>DATE OF TIS:</u> 23 July 1966	5
<u>DATE OF PHOTOGRAPHY:</u> 28 July 1965	6
<u>DATE OF INTELLIGENCE REVIEW:</u> 23 September 1965	7
5. <u>LOCATION:</u> 21-07-30N 107-21-09E, UTM YJ 442376. Located on North Vietnam Route 18, approximately 9 NM NNE of Cam Pha Port.	8
6. <u>DESCRIPTION:</u> Oriented NE/SW, this bridge has overall dimensions of 80 ft by 12 ft with probably 2 concrete deck type spans. Details on substructure and vertical clearance unknown. No readily available alternate crossing sighted in vicinity of the target.	10
7. <u>SIGNIFICANCE:</u> This target supplements a major crossing, BE 615-0283, over 500 yards to the south on Route 18. This route provides access along the NE coast from Route 4 near the Communist Chinese border to Ha Noi via mining and port activities at Cam Pha and Hon Gai.	14
8. <u>TARGET ENVIRONMENT:</u> This target is situated in a hilly coastal area bordered on the west by mountains reaching over 2000 ft and on the east by marine swamp. The local region is lightly populated with the nearest village, Khe Lan, approximately one NM to the south. The terrain surrounding the target is undeveloped and the stream appears unfordable at the bridge site.	18
9. <u>DEFENSE ENVIRONMENT:</u>	24
a. No SAM sites have been identified within SA-2 missile range (17.5 NM) of this target. Two missile sites have been identified 18-30 NM distant.	25
b. The nearest identified AAA defenses are located in the Cam Pha area, approximately 7 NM S, where 5 inactive sites have been reported.	26
c. No military units are known to be in this area; however, some machine gun/small arms fire from local militia guarding Route 18 bridges would be anticipated.	27
10. <u>DAMAGE OBJECTIVE:</u> Interdiction of traffic from Communist China to the Hon Gai - Cam Pha Area. Damage criterion is collapse of at least one span.	30
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~~TOP SECRET~~

A-B-BPg-2

(Revised by 9th Note to Holders)

Tab BPg to
Annex B to
Appendix A

~~TOP SECRET~~

11. EFFECT ON NVN: Effective interdiction at this location would deny direct road access from Communist China to the Hon Gai - Cam Pha mining district as well as an important secondary access to the Ha Noi - Hai Phong.

12. RECUPERABILITY: Assuming non-availability of tactical military bridging, probable loss of one span over the relatively shallow feeder stream at this bridge site may take less than 3 to 4 days to restore with locally available timber materials. This stream appears probably fordable during less inclement periods of the year. An estimated sandy bottom condition may be made supportable to water traffic within an equally short period. Permanent replacement to its original concrete design should take at least one month, assuming ready availability of cement and reinforcing steel.

13. COLLATERAL DAMAGE:

a. None

Population				Casualties*			
Target Area		Adjacent Area		Target Area		Adjacent Area	
Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ
0	0	0	0	0	0	0	0

*Casualties estimated under daylight alert conditions.

14. RECOMMENDED WEAPONS AND SORTIES:

a. In order to achieve the desired damage criterion, weapons/sorties required over target:

WEAPON	250# SNAKEYE	250# or BULLPUP	250# or BOMB	500# or BOMB	750# or BOMB
(80x12)	210/18	68/34	900/75	575/64	460/77

b. Weapons/sorties operationally required to achieve "over target" requirement shown above:

256/22	83/42	1098/92	701/78	561/94
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15. PROBABILITY OF ACHIEVING DESIRED DAMAGE CRITERION: 85%

~~TOP SECRET~~

A-B-BPg-3

(Revised by 9th Note to Holders)

Tab BPg to
Annex B to
Appendix A

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TOP SECRET

Appendix

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 18.78 1
2. BE NUMBER: 616-1253 2
3. IDENTIFICATION: Lam Hwy Br NE ov Song Luc Nam Trib 3
4. DATE OF INFORMATION: 14 July 1966 DATE OF TIS: 4
20 June 1966 5
5. LOCATION: 21-21-33N 106-32-15E, UTM XJ 594625. Located 6
on North Vietnam Route 13B, 42 NM ENE of Hanoi. 7
6. DESCRIPTION: Oriented NE/SW, the bridge is a three span 8
probable concrete deck type structure on concrete piers with 9
overall dimensions of 125' x 16'. The bridge approaches are 10
slightly elevated above the surrounding terrain. An abandoned 11
ford with approaches in poor condition is situated approxi- 12
mately 400 feet south of the bridge. 13
7. SIGNIFICANCE: This bridge is one of two selected 14
targets (JCS 18.67 and 18.78) on Route 13B, the nearest 15
alternate road via Route 4 to the Lang Son-Hanoi rail line 16
and Route 1A, the principal highway LOC in northeast North 17
Vietnam. Route 13B in combination with the section of Route 18
4 from Lang Son to Dinh Lap could accommodate slightly over 19
half of the capacity of Route 1A between Lang Son and Hanoi. 20
8. TARGET ENVIRONMENT: The target is situated in a broad, 21
gently rolling alluvial plain extending approximately 10 NM 22
to the northeast. The plain broadens and becomes flatter as 23
it merges with the Red River Delta to the southwest. The 24
surrounding land is extensively cultivated with dryland crops 25
on the higher areas and wetland rice in numerous reclaimed 26
stream beds dissecting the area and producing a distinctive 27
irregular cultivation pattern. The village of Lam is located 28
1 1/2 NM SSW of the bridge and the remaining population in the 29
area is confined to small, widely separated agricultural 30
hamlets. The stream over which the bridge passes joins the 31
meandering Song Luc Nam 1/2 NM SW of the bridge. 32
9. DEFENSE ENVIRONMENT: 33
 - a. Twelve SAM sites have been identified within SA-2 34
missile range (17.5 NM) of the target, and 17 additional 35
SAM sites have been identified 18-30 NM distant. 36
 - b. No AAA defenses have been identified in the immediate 37
vicinity of the target. A 6-position inactive 37-mm 38
sight has been identified approximately 2.5 NM north in 39
the Dong Giao area. 40
 - c. Moderate HMO and small arms fire is anticipated, 41
due to the presence of several barracks in the vicinity. 42

~~TOP SECRET~~

A-B-BPh-2

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Appendix A

~~TOP SECRET~~

(Revised by 9th Note to Holders)

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10. DAMAGE OBJECTIVE: Interdiction of traffic on Route 13B. 1
Damage criterion is destruction of at least one span. 2

11. EFFECT ON NVN: Interdiction of this bridge will 3
interrupt through traffic on Route 13B and create a bottle- 4
neck until the bridge is restored. The use of this route as 5
an alternate to Route 1A would be temporarily denied. 6

12. RECUPERABILITY: Immediate low capacity bypass of the 7
bridge could be accomplished over the nearby abandoned ford 8
which could be improved to a limited serviceable status in 9
one to two days. Preparation of a permanent ford could 10
require up to a week. Installation of a temporary ford could 11
require up to a week. Installation of a temporary timber 12
deck type section of estimated 40 ft. length could be accom- 13
plished within one week. Reconstruction of a destroyed span 14
to pre-strike capacity would require six to eight weeks. 15

13. COLLATERAL DAMAGE: Insignificant. 16

14. RECOMMENDED WEAPONS AND SORTIES: 17

a. In order to achieve the desired damage criterion, 18
weapons/sorties required over target: 19

Weapon	250#	500#	250#	1000#	750#
	<u>SNAKEYE</u>	<u>SNAKEYE</u>	<u>BULLPUP</u>	<u>BULLPUP</u>	<u>BOMB</u>
	130/11	83/9	50/25	23/12	270/45

 20

b. Weapons/sorties operationally required to achieve 21
"over target" requirement shown above: 22

159/13	100/11	61/31	28/14	329/55
--------	--------	-------	-------	--------

 23

15. PROBABILITY OF ACHIEVING DAMAGE CRITERION: 85% 24

~~TOP SECRET~~

A-B-BPh-3

Tab BPh to
Annex B to
Appendix A

(Revised by 9th Note to Holders)

TAB BQ TO ANNEX B TO APPENDIX A

TARGET NO. 18.8



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(Revised by 17th N/H)

A-B-BQ-1

Tab BQ to Annex B
to Appendix A

~~SECRET~~

TARGET INFORMATION AND STRIKE

1. **TARGET NUMBER:** 18.8 1
2. **B.E. NUMBER:** 617-0001 2
3. **IDENTIFICATION:** Dong Phong Thuong Railroad and Highway
Bridge Over Song Len. 3
4
4. **DATE OF INFORMATION:** 19 September 1968 5
DATE OF TISD: 23 January 1969 6
DATE OF PHOTOGRAPHY: 2 April 1965 7
DATE OF INTELLIGENCE REVIEW: 17 October 1968 8
5. **LOCATION:** 19-58-39N 105-50-50E, located on the Ha Noi-Vinh
rail line and highway Route 1A, 11 NM N of Thanh Hoa. 9
10
6. **DESCRIPTION:** Bridge, oriented N/S, is 525' long and 22' wide. 11
It has 3 steel through-truss spans with masonry piers and abutments. 12
A single highway lane is superimposed over the single, meter gauge 13
track through the trusses. There are 5 rail bypass bridges (617-1552, 14
-3552, -3615, -4386, and -4903) and 4 highway bypasses: 3 bridges 15
(617-4719, -4720, and -4910) and a ferry (617-4721). 16
7. **SIGNIFICANCE:** A vital link on the important rail line connecting 17
Ha Noi with Thanh Hoa and Vinh, the most southern station in the North 18
Vietnam rail system. 19
8. **TARGET ENVIRONMENT:** Target crosses the Song Len (river) 20
about 6 NM NE of its confluence with the Song Ma. It lies on a low flat 21
plain; hills lie 2.0 NM ENE, 1.5 NM W, 1.2 NM NW, and 1.7 NM S of 22
target. Wetland rice covers the plain, scrub and forest cover the hills 23
W and NW of target, and grasslands cover the hill S of target. The Song 24
Len is 450' wide at the target. Dense population along river, sparse 25
away from river. 26
9. **DEFENSE ENVIRONMENT:** 27
 - a. The target is within the SAM envelope. 28
 - b. AAA activity has been identified within 3NM of the Target. 29
 - c. HMG and small arms fire is anticipated. 30
10. **DAMAGE OBJECTIVE:** Interdiction of traffic between Ha Noi 31
and Vinh, N of Thanh Hoa. Damage criterion is the collapse of at least 32
one span.

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A-B-BQ-2

(Revised by 17th Note to Holders)

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~~SECRET~~

11. EFFECT ON NVN: Destruction of this bridge will halt rail traffic and hamper highway traffic between Ha Noi and Thanh Hoa.

12. RECUPERABILITY:

a. Rail

(1) Line capacity: 9 Trains/3500 ST each way per day.

(2) Emergency facility: Vehicular shuttle via an emergency ferry and/or pontoon bridge would permit 1000 to 2000 ST/Day capacity after 5-7 days.

(3) Bridge reconstruction: Emergency restoration to full capacity would require 4 to 5 weeks. Complete restoration to pre-attack status would require 4 to 6 months.

b. Highway vehicular traffic could be restored within a matter of days, following restoration for rail traffic.

13. COLLATERAL DAMAGE:

a. Insignificant

b. Population

Casualties*

Target Area		Adjacent Area		Target Area		Adjacent Area	
Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ
0	0	0	250	0	0	0	3

*Casualties estimated under daylight alert conditions.

14. RECOMMENDED WEAPONS AND SORTIES:

a. In order to achieve the desired damage criterion weapons/sorties required over target:

WEAPON	250#	500#	500#	750#
	SNAKEYE	or SNAKEYE	or BOMB	or BOMB
	1170/96	238/26	945/105	154/26

b. Weapons/sorties operationally required to achieve "over target" requirement shown above:

1404/117	286/32	1134/126	185/31
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15. PROBABILITY OF ACHIEVING DESIRED DAMAGE CRITERION:

85%

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(Revised by 17th Note to Holders)

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TARGET NO. 18.9

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A-B-BR-1

Tab BR to Annex B
to Appendix A

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 18.9 1
2. BE NUMBER: 0617-0388 2
3. IDENTIFICATION: Xom Ca Trang Hwy Br ov Rao Cai 3
4. DATE OF INFORMATION: March 1965 DATE OF TIS: 15 April 1965 4
5
5. LOCATION: 17 57 30N 105 48 55E, WE 864656 Located on 6
VN Route 12, 23 miles north of the Laos/VN border. 7
6. DESCRIPTION: Oriented N/S with overall dimensions of 8
350 x 16 feet, the structure is a high-level two-span steel 9
half-thru truss bridge. The decking is probably wood and the 10
piers are concrete. Additional high-level bridge is located 11
just north of this target, 2 span steel truss, 190 x 16 ft. 12
7. SIGNIFICANCE: The bridge has been recently constructed 13
to replace a ford crossing 1 mile north of the village of Xom 14
Ca Trang. Route 12 serves as a supply route into Laos via the 15
Mu Gia Pass; it is an alternate to National Route 8 and runs 16
from the border to a junction with National Route 1, 29 miles 17
SE of Vinh. 18
8. TARGET ENVIRONMENT: The target lies in mountainous 19
terrain at the border region. The river has high steep banks 20
in this area and has a swift current. Fords in the region are 21
reported as being impassable during the rainy season. Local 22
vegetation is dense forest; this area is unpopulated and 23
uncultivated. The site is near the end of an abandoned rail- 24
road spur from the main Hanoi-Vinh route, portions still 25
visible. 26
9. DEFENSE ENVIRONMENT:
 - a. There are 2 active and five inactive AAA sites in the 27
immediate vicinity of the target, amounting to 8 light 28
(14.5 mm-37 mm) AAA positions occupied and 22 positions 29
unoccupied. (DOI: 10 Feb 65) 30
 - b. No installations or support camps within 600 ft of 31
target, other than 2 AAA positions immediately north of 32
bridge. 33
 - c. No known radar is located in the immediate area. The 34
nearest, a KNIFEREST-B early warning site, is at Do Khe, 35
about 10 NM northwest. EW coverage is also provided by 36
Dong Hoi (KNIFEREST-B and SCR-270) and by Vinh Son 37
(SCR-270 and RUS-2). 38
10. DAMAGE OBJECTIVE: Destruction of at least one span. 39
11. EFFECT ON NVN Should this bridge be interdicted, 40
vehicular movement between North Vietnam and southern Laos 41
would be significantly reduced. 42
12. RECUPERABILITY: Although steep bank conditions exist 43
here, a previously reported fording site appears to still be 44
available for use approximately 500' west of the bridge. This 45
would undoubtedly be utilized immediately upon interdiction of 46

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(Revised by 7th Note to Holders)

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the bridge at slightly less than present load capacity. This location is somewhat isolated from bridging stocks but necessary repair material from nearby abandoned rail facilities may permit recovery of an estimated 90 foot span loss within a week. With the relatively high bridge clearance, use of local timber may take nearly as long to effect bridge recovery due to height of intermediate pier construction involved.

13. COLLATERAL DAMAGE: Insignificant.

14. RECOMMENDED WEAPONS AND SORTIES:

a. In order to achieve the damage level of 85%, weapons/sorties required over target:

Weapon:	250#	500#	750#	1000#
	SVAKYE	or BOMB	or BOMB	or BOMB
	150/13	290/32	200/33	130/43

b. Weapons/sorties operationally required to achieve "over target" requirements shown above:

183/16	354/39	244/40	158/52
--------	--------	--------	--------

15. PROBABILITY OF ACHIEVING DESIRED DAMAGE CRITERION: 85%

~~TOP SECRET~~

A-B-BR-3

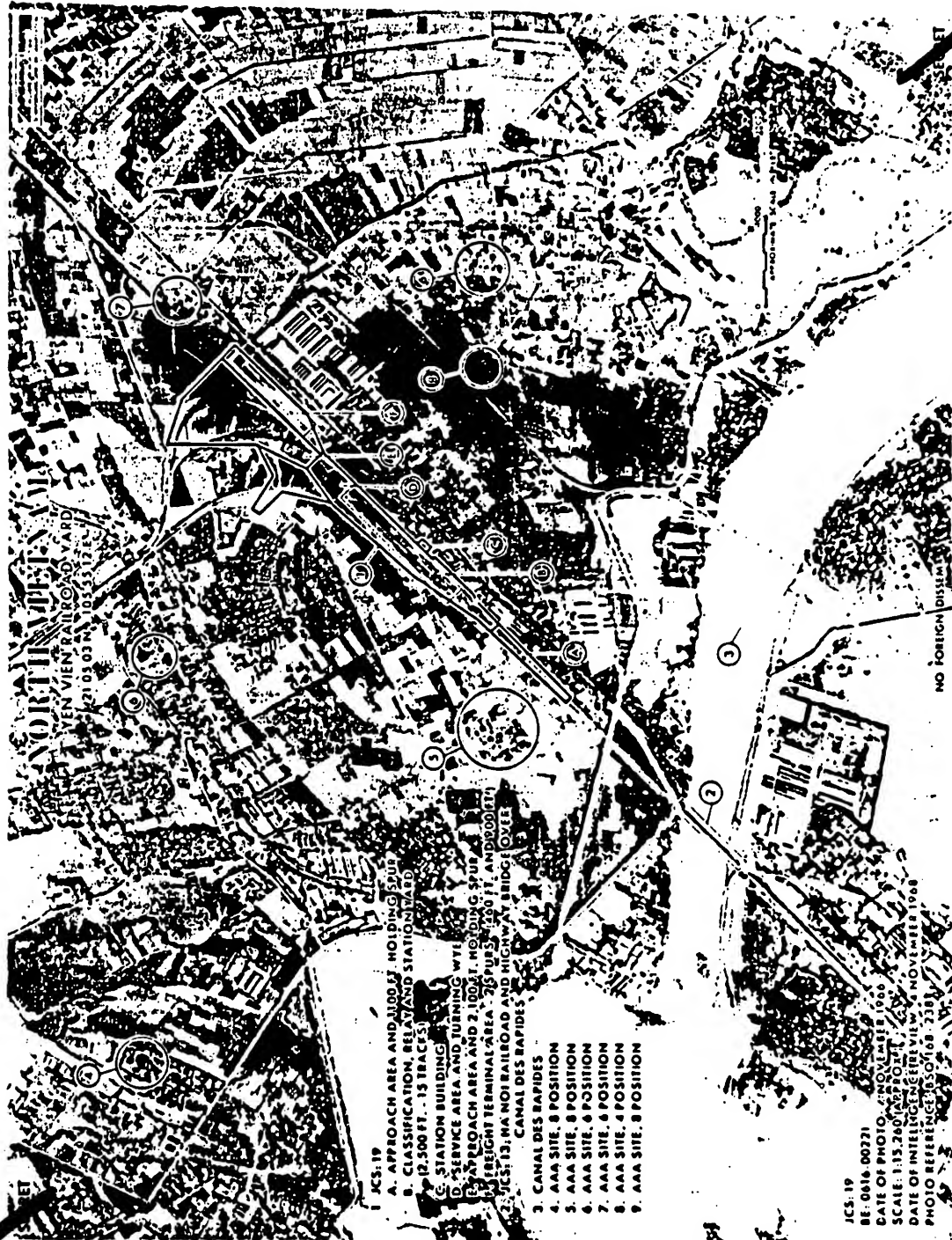
(Revised by 7th Note to Holders)

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TAB BS TO ANNEX B TO APPENDIX A

TARGET NO. 19



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(Revised by 16th N/H)

A-B-BS-1

Tab BS to Annex B
to Appendix A

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 19 1
2. B. E. NUMBER: 616-0221 2
3. IDENTIFICATION: Yen Vien Railroad Yard 3
4. DATE OF INFORMATION: 17 October 1968 4
DATE OF TISD: 31 January 1969 5
DATE OF PHOTOGRAPHY: 4 November 1966 6
DATE OF INTELLIGENCE REVIEW: 4 November 1968 7
5. LOCATION: 21-05-03N 105-55-12E, located 5.5 NM NE of Ha Noi 8
at the junction of the rail lines going to Dong Dang, Lao Cai, and Ha Noi 9
(via Gia Lam). 10
6. DESCRIPTION: The yard, oriented NE/SW, is 5200' long and 1400' 11
wide overall. A single meter gauge track from Gia Lam enters at the S 12
end and 2 dual gauge tracks enter at the N end, 1 from Lao Cai, to the 13
NW and the other from Dong Dang, to the NE. The yard consists of 3 14
major functional areas. The yard proper is 2500' long and 15 tracks wide, 15
with a passenger station centered along its E side. The locomotive service 16
area is on the N and consists of a turning wye and coaling tracks. The 17
freight terminal area, to the NE, contains a pair of spur tracks. The number 18
of dual gauge tracks within the yard is not known. 19
7. SIGNIFICANCE: This yard includes the largest classification facility 20
in North Vietnam and is the southern terminal of the dual gauge capability 21
from Communist China, via Dong Dang. It controls traffic from Dong 22
Dang and Lao Cai, as well as Thai Nguyen. In the event of interdiction of 23
the line between the yard and Ha Noi, the yard could be utilized as a 24
transshipment terminal to a greater extent than it probably is now. 25
8. TARGET ENVIRONMENT: Target is located 5.5 NM NE of Ha 26
Noi at the "Y" in the rail line from Ha Noi; one branch continues to the 27
NE to Dong Dang, the other turns to the NW to Lao Cai. The elevation 28
is about 15' above sea level. Target is situated on the flat Red River 29
Delta Plain; the area is intensively cultivated in wetland rice. A small 30
industrial complex is located just E of the target. Several small villages 31
are located within 1 NM of the target. The Ha Noi - Vinh Ninh Road 32
parallels the rail line and passes immediately to the SE of the target. 33
9. DEFENSE ENVIRONMENT: 34
 - a. The target is within the SAM envelope. 35
 - b. AAA activity has been identified within 3NM of the target. 36
 - c. HMG and small arms fire is anticipated. 37

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A-B-BS-2

(Revised by 16th Note to Holders)

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10. DAMAGE OBJECTIVE:

Primary - Destruction of the turning wye and locomotive servicing area and of the switches leading into the classification tracks.

Secondary - Destruction of classification tracks, freight sidings, locomotive, and rolling stock located within the yard.

11. EFFECT ON NVN: Destruction of this yard would seriously disrupt rail traffic between Communist China and Ha Noi or points farther S. Destruction of the locomotive servicing area would increase the burden at other area facilities. Destruction of equipment would reduce system capacity if resupply could not be effected.

12. RECUPERABILITY:

a. Estimated capacity:

Yen Vien - Dong Dang line 9 Trains/6000 ST EWPD

Yen Vien - Kinh No segment 15 Trains/5600 ST EWPD
(toward Lao Cai or Thai Nguyen)

Yen Vien - Gia Lam segment 15 Trains/5400 ST EWPD
(toward Ha Noi or Hai Phong)

Yen Vien Yard 14,750 ST/day*

b. Emergency facility: Construction of one through or bypass track would require 1 or 2 days.

c. Estimated capacity recovery:

3 days - 740 ST/day

7 days - 1,475 ST/day

10 days - 4,425 ST/day

15 days - 5,900 ST/day

30 days - 11,600 ST/day

45 days - 14,000 ST/day

d. Servicing facilities would require an estimated 3 months to achieve pre-attack operational capability. Telecommunications and signaling equipment would require 4 months to achieve pre-attack capability. (Note: The estimated recuperability figures are based upon the interdiction and recuperability of selected major facilities and structures on the North Vietnamese railroad system).

*Classification, terminal, and relay.

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A-N-RS-3

(Revised by 16th Note to Holders)

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Appendix A

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13. COLLATERAL DAMAGE:

a. Insignificant

b. Population

Casualties*

Target Area		Adjacent Area		Target Area		Adjacent Area	
Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ
0	0	0	800	0	0	0	8

*Casualties estimated under daylight alert conditions.

c. Physical collateral damage would occur to warehouses, rolling stock, and locomotives. An estimated one or two locomotives and 40 to 60 cars are in the yard at any one time.

14. RECOMMENDED WEAPONS AND SORTIES:

This target is comprised of 6 areas, 2 of which have been delineated for weapons application. Weapons and sorties have been computed for each area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target are also shown:

(1) In order to achieve a damage level of 12%, weapons/sorties required over target:

Weapons:	250# SNAKEYE or	500# SNAKEYE or	500# BOMB or	750# BOMB
Area B (1625' x 225')	32/3	20/2	35/4	24/4
Area F (1140' x 170')	19/2	12/1	25/3	17/3
Total:	51/5	32/3	60/7	41/7

(2) Weapons/sorties operationally required "over target" requirements shown above:

Total:	62/5	39/4	72/8	58/8
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15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%

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A-B-RS-4

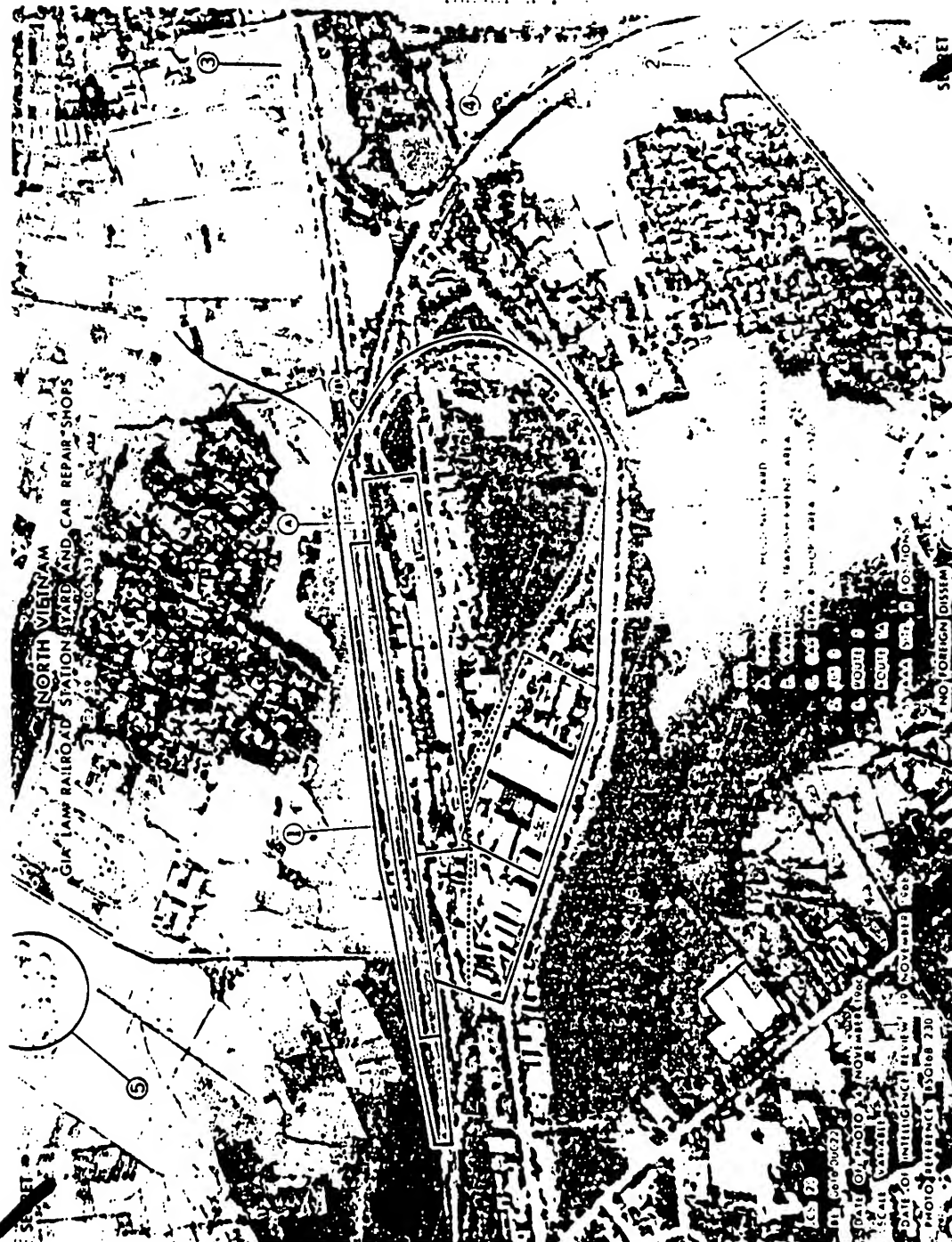
(Revised by 16th Note to Holders)

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TAB ET TO ANNEX B OF APPENDIX A

TARGET 211



~~SECRET~~

Classified by 1-11, R/H)

A-E-ET-1

~~SECRET~~

TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 20 1
2. H. E. NUMBER: 018-0022 2
3. IDENTIFICATION: Gia Lam Railroad Station, Yard, and Car Repair Shop. 3
4
4. DATE OF INFORMATION: 17 October 1968 5
DATE OF TISD: 23 January 1969 6
DATE OF PHOTOGRAPHY: 4 November 1966 7
DATE OF INTELLIGENCE REVIEW: 19 November 1968 8
5. LOCATION: 21-02-59N 105-53-05E, located 2 NM ENE of Ha Noi, at the junction of the Ha Noi - Dong Dang rail line and the line to Hai Phong. 9
10
6. DESCRIPTION: This facility, oriented ENE/WSW is 4400' long and 1225' wide, overall. A single meter gauge track, from Ha Noi, enters the yard's WSW end. Two meter gauge tracks, from Yen Vien and Hai Phong, enter at the ENE end. The station yard is 3000' long and 6 tracks wide. Twelve warehouses are located on the S side of the yard, served by a single track. The car repair shop area is S of the warehouse area and is reached via a long, curved access track. This area is 2050' long, 520' wide, and contains about 165,000 sq. ft. of floor space. There are 3 locomotive/railroad car repair shops consisting of 6 major shop buildings and many smaller ones, as well as two large transfer tables. 11
12
13
14
15
16
17
18
19
7. SIGNIFICANCE: The shops comprise the major railroad rolling stock repair facility in North Vietnam and are capable of major repairs and overhauls. The associated yard controls through traffic between Ha Noi and either Yen Vien or Hai Phong; it also has a minor classification capability. 20
21
22
23
8. TARGET ENVIRONMENT: Target, about 15' above sea level, located on extensive, flat, rice-cultivated, E bank flood plain of NW-SE oriented Red River; Ha Noi is 2.3 NM WSW of target site on the W bank of Red River. Plain in immediate vicinity of target area has an airfield and several villages within about 0.7 NM of site, and is bordered on W by Red River 1.0 NM away, on N and E by meandering, E-W oriented tributary Canal Des Rapides, 1.2 and 2.7 NM away. Main RR line E from Ha Noi approaches target across Red River and mid-stream island, crosses Canal Des Rapides NE of target. 24
25
26
27
28
29
30
31
9. DEFENSE ENVIRONMENT: 32
 - a. The target is within the SAM envelope. 33
 - b. AAA activity has been identified within 3 NM of the target. 34
 - c. HMG and small arms fire is anticipated. 35

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A-B-BT-2

(Revised by 16th Note to Holders)

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10. DAMAGE OBJECTIVE:

Primary - Destruction of the major shop buildings

Secondary - Destruction of the switches at either end of the yard and of locomotives and rolling stock located in the yard, on the transshipment siding or in the shop area.

11. EFFECT ON NVN: Destruction of this target would materially reduce the NVN rolling stock repair capability and temporarily disrupt traffic on the 3 rail lines.

12. RECUPERABILITY:

a. Estimated capacity:

Gia Lam -- Ha Noi Line -- 18 Trains/8,100 ST EW/PD

Gia Lam -- Yen Vien Line -- 15 Trains/5,400 ST WW/PD

Gia Lam -- Hai Phong Line -- 9 Trains/4,600 ST EW/PD

Gia Lam Yard 3,150 ST/Day*

* Relay and classification.

b. Emergency facility: Construction of a through or bypass track for the yard would require 1 to 2 days.

c. Estimated capacity recovery - rail yard:

3 days - 180 ST/Day

7 days - 320 ST/Day

10 days - 950 St/Day

15 days - 1,260 ST/Day

30 days - 2,360 ST/Day

45 days - 2,290 ST/Day

Telecommunications and signalling equipment would require 1 to 2 months to achieve pre-attack capability.

d. Estimated car shops recovery:

1 month - Limited car servicing and running repairs capability

2 months - Large-scale servicing and running repairs capability

3 to 6 months - 50% of pre-attack major repair capability **

1 year - 100% of pre-attack major repair capability **

** Machine tools replaced from Communist China and U.S.S.R. as soon as appropriate work area can be cleared and prepared.

13. COLLATERAL DAMAGE:

a. Light damage to surrounding area.

b. Population Casualties*

Population				Casualties*			
Target Area		Adjacent Area		Target Area		Adjacent Area	
Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ
0	800	0	1500	0	48	0	15

*Casualties estimated under daylight alert conditions.

~~SECRET~~

A-R-BT-3

(Revised by 16th Note to Holders)

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Appendix A

~~SECRET~~

14. RECOMMENDED WEAPONS AND SORTIES:

This target is comprised of 3 areas, all of which have been delineated for weapons application. Weapons and sorties have been computed for each area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target are also shown:

(1) In order to achieve the desired damage level (12% Damage to RR Yard; 30% Damage To Transshipment Area and Repair Shops), weapons/sorties required over target:

WEAPONS	250# SNAKEYE	500# SNAKEYE	500# BOMB	750 BOMB
Area A (3000'x 130')	38/3	23/3	57/6	39/7
Area B (2270'x 330')	151/13	78/9	116/13	68/11
Area C (1200'x 510')	145/12	66/7	84/9	42/7
TOTAL	334/28	167/19	257/28	148/25

(2) Weapons/sorties operationally required to achieve "over target" requirements shown above:

401/33	201/22	309/34	179/30
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15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%

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A-B-BT-4

(Revised by 16th Note to Holders)

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TAB BU TO ANNEX B TO APPENDIX A

TARGET NO. 21



~~SECRET~~

(Revised by 15th N/H)

A-B-BU-1

Tab BU To Annex B
To Appendix A

~~SECRET~~

TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 21 1
2. BE NUMBER: 616-0031 2
3. IDENTIFICATION: Ha Noi Railroad Station, Classification Yard, and Shops 3
4. DATE OF INFORMATION: 13 March 1968 4
DATE OF TIS: 18 March 1968 5
DATE OF PHOTOGRAPHY: 28 October 1967 6
DATE OF INTELLIGENCE REVIEW: 27 March 1968 7
5. LOCATION: 21-01-18N 105-50-39E. Located in the southwestern part of the city. 8
6. DESCRIPTION: Oriented north/south. Overall dimensions are 13,350 feet long by 620 feet wide. The target has 12,900 feet of track available for freight train classification or terminal operation. It contains a locomotive repair area (A) with 30 buildings and a 68 foot turntable; a rolling stock repair area (B) with 9 buildings and 6 spurs, totaling 1,920 feet of track; a maintenance area (C) with 15 buildings and an open coal storage area; a freight and storage area (D) with 10 buildings and 5 spurs, totaling 2,100 feet of track; a classification yard and freight terminal (E) with 5 buildings and 6 sidings, totaling 6,390 feet of track; a transshipment yard (F) with 2 buildings and 4 spurs, totaling 4,410 feet of track; and a passenger area (G) with 6 buildings and 5 sidings, totaling 10,120 feet of track. 9
7. SIGNIFICANCE: This target contains the largest (meter gage) locomotive repair facility in North Vietnam. In addition, it has some capacity to repair (meter gage) rolling stock. The yard is the focal point of the entire railroad system in North Vietnam. 10
8. TARGET ENVIRONMENT: The target, about 16 feet above sea level, is in the western part of Ha Noi. The built-up area extends from target about 1.5 NM NNW to the large Ho Tay (lake), 1.3 NM NE and E to the broad, braided Red River, and about 1.3 NM to the S and 0.7 NM to the W. The city is on a broad, flat plain cultivated in wetland rice. A park is located at the SE corner of the target. 11
9. DEFENSE ENVIRONMENT: 12
 - a. The target is within the SAM envelope. 13
 - b. AAA activity has been identified within 3 NM of the target. 14
 - c. HMG and small arms fire is anticipated. 15
10. DAMAGE OBJECTIVE: 16

Primary - Destruction of the locomotive repair area at the south end of the yard and the car repair shops on the east side of the yard. 17

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(Revised by 15th Note to Holders)

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Secondary - Destruction of locomotives and cars. Destruction of the maintenance area, the freight and storage area, the transshipment area, and the passenger area.

Damage level is 12% and 30% for supporting structures.

11. EFFECT ON NVN: Destruction of this target would reduce NVN capacity to repair locomotives and rolling stock and place a larger burden on the other repair centers - Lao Cai, Hai Phong, Lang Dang, Gia Lam, and Thai Nguyen. The destruction of the classification and terminal functions within the yard would seriously disrupt rail traffic south from Ha Noi.

12. RECUPERABILITY:

a. Estimated maximum line capacity:

(Ha Noi - Yen Vien): TD 9 (EWP) ST/Day 3,200
(Ha Noi - Hai Phong): TD 9 (EWP) ST/Day 4,600
(Ha Noi - Vinh): TD 9 (EWP) ST/Day 2,200

TOTAL TD 27 (EWP) 10,000 ST/Day

b. Emergency facility: Temporary through track - "shoo fly":

3 days - 450 ST/Day
7 days - 900 ST/Day

c. Estimated capacity: 10 days - 2,700 ST/Day
15 days - 3,600 ST/Day
30 days - 6,700 ST/Day
45 days - 8,500 ST/Day

Servicing facilities would require an estimated 3 months to achieve pre-attack operational capability. Repair facilities would require 9 to 12 months for reconstruction and importation of machinery to replace that destroyed. Telecommunications and signalling equipment would require 4 months to achieve pre-attack capability. (Note: The estimated recuperability figures are based upon the interdiction and recuperability of selected major facilities and structures on the North Vietnamese railroad system.)

13. COLLATERAL DAMAGE:

a. Minor damage to surrounding area.

Population				Casualties*			
Target Area		Adjacent Area		Target Area		Adjacent Area	
Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ
0	900	0	4500	0	54	0	45

* Casualties estimated under daylight alert conditions.

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#21

(Revised by 15th Note to Holders)

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14. RECOMMENDED WEAPONS AND SORTIES:

This target, with the largest locomotive repair facility in North Vietnam, is comprised of seven areas. Five sub-areas have been delineated for weapons application. Weapons and sorties have been computed for each area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target are also shown:

(1) In order to achieve a damage level of 30%, weapons/sorties required over target:

WEAPON	500# SNAKEYE	750# BOMB
Area A (300 x 800)	29/3	22/4
Area B-1 (150 x 700)	12/1	19/3
Area C-1 (100 x 700)	9/1	18/3
Area E-1* (150 x 900)	9/1	15/3
Area F-1 (100 x 550)	10/1	14/2
Totals:	69/7	88/15

(* The desired damage level for Area E-1 is 12%)

(2) Weapons/sorties operationally required to achieve "over target" requirements shown above:

Totals:	83/9	106/18
---------	------	--------

(3) In order to achieve a damage level of 70%, weapons/sorties required over target:

WEAPON	500# SNAKEYE	750# BOMB
Area A	98/11	75/12
Area B-1	41/5	64/11
Area C-1	31/3	61/10
Area E-1*	9/1	15/3
Area F-1	34/4	48/8
Totals	213/24	263/44

(* The desired damage level for Area E-1 is 12%)

(4) Weapons/sorties operationally required to achieve "over target" requirements shown above:

Totals:	256/29	315/53
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15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%

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#21

(Revised by 15th Note to Holdern)

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Annex B to
Appendix A

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TAB EV TO ANNEX B TO APPENDIX A

TARGET NO. 01.1



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(Revised by 16th N/H)

A-B-BV-1

Tab IV to Annex B
to Appendix A

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 21.1 1
2. B. E. NUMBER: 617-0027 2
3. IDENTIFICATION: Vinh Railroad Station Yard and Shop 3
4. DATE OF INFORMATION: 22 October 1968 4
DATE OF TISD: 23 January 1969 5
DATE OF PHOTOGRAPHY: 9 May 1965 6
DATE OF INTELLIGENCE REVIEW: 4 November 1968 7
5. LOCATION: 18-41-18N 105-40-05E, located 2 NM NW of Vinh, 8
it is the southern terminal station on the Ha Noi-Vinh rail line. 9
6. DESCRIPTION: The yard, oriented N/S, is 5,500' long and 500' 10
wide, overall. The yard is served by single meter gauge track. The 11
yard proper is 2,250' long and 5 tracks wide, with a station building 12
and a water tower on the E side. Two car service buildings are located 13
on a spur just NW of the yard proper and a turning wye and locomotive 14
coaling facility are located farther N, to the W side of the main track. 15
South of the yard, the track branches E into the Vinh port area and S, 16
a short distance, to the point beyond which the track has been abandoned. 17
7. SIGNIFICANCE: The southern terminal of the Ha Noi-Vinh rail 18
line, it is the largest rail facility S of Thanh Hoa. Its principal functions 19
would be equipment servicing and transshipment of material to highways 20
for movement farther S. 21
8. TARGET ENVIRONMENT: Target is about 1.2 NM N of Vinh and 22
9 NM SW of the mouth of the Song Ca River at an elevation of approximately 23
18'. Target is situated on a nearly flat plain planted in wetland rice. To 24
the N and NE are many parallel, generally NW-SE trending sand ridges. 25
Paddy fields occupy the low areas between ridges. To the W-NW hills 26
rise to about 1,000' above sea level 5 NM from the target. 27
9. DEFENSE ENVIRONMENT: 28
 - a. The target is within the SAM envelope. 29
 - b. AAA has been identified within 3NM of the target. 30
 - c. HMG and small arms fire is anticipated. 31
10. DAMAGE OBJECTIVE: 32
 - Primary - Destruction of the switches at each end of the yard, 33
the turning wye and locomotive coaling area, and the car service shops. 34
 - Secondary - Destruction of yard tracks and locomotives and 35
rolling stock within the area. 36

~~SECRET~~ NO FOREIGN DISSEM EXCLUDED FROM AUTOMATIC DOWNGRADING
A-B-BV-2

(Revised by 16th Note to Holders)

Tab BV to
Annex B to
Appendix A

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11. EFFECT ON NVN: Destruction of this yard would shift the entire burden of equipment servicing N to Thanh Hoa, if not to Ha Noi (200 miles away). Freight terminal operations would have to be split up among several small sidings, distributed over many miles of the line, due to the inadequacy of individual alternate facilities. This in turn would place an additional burden on highway and waterway routes for southward movement of material.

12. RECUPERABILITY:

a. Estimated capacity

Ha Noi-Vinh line 9 Trains/3500 ST EWPD

Vinh Yard 9,800 ST/Day*

b. Emergency facility: Construction of one through or bypass track (for limited traffic through to the Vinh port area) would require 1 or 2 days.

c. Estimated capacity recovery:

3 days - 490 ST/day

7 days - 980 ST/day

10 days - 2,940 ST/day

15 days - 3,925 ST/day

30 days - 7,355 ST/day

45 days - 9,320 ST/day

Servicing facilities would require 1 to 2 months to achieve pre-attack operational capability. Telecommunication and signalling equipment would require 2 months to achieve pre-attack capability. (Note: The estimated recuperability figures are based on the interdiction and recuperability of selected major facilities and structures on the North Vietnamese railroad system.)

13. COLLATERAL DAMAGE:

a. None

b. Population

Casualties**

Target Area		Adjacent Area		Target Area		Adjacent Area	
Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ
0	350	0	0	0	21	0	0

**Casualties estimated under daylight alert conditions.

* Terminal and relay.

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A-B-BV-3

(Revised by 16th Note to Holders)

Tab. IV to
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Appendix A

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14. RECOMMENDED WEAPONS AND SORTIES:

This target is comprised of 5 areas, 2 of which have been delineated for weapons application. Weapons and sorties have been computed for each area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target are also shown:

(1) In order to achieve the desired damage level (12% damage to RR yard; 30% damage to shop area), weapons/sorties required over target:

Weapons:	250# <u>SNAKEYE</u>	500# <u>SNAKEYE</u>	500# <u>BOMB</u>	750# <u>BOMB</u>
Area C (110'x42')	8/1	5/1	17/2	10/2
Area D (1660'x80')	17/1	11/1	33/4	23/4
Total:	<u>25/2</u>	<u>16/2</u>	<u>50/6</u>	<u>33/6</u>

(2) Weapons/sorties operationally required to achieve "over target" requirements shown above:

30/3	20/2	60/7	16/7
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15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%

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A-B-BV-4

(Revised by Data Note to Holders)

Appendix A



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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 21.11
2. B. E. NUMBER: 616-0409
3. IDENTIFICATION: Thai Nguyen Railroad Station Yards and Shop.
4. DATE OF INFORMATION: 16 October 1968
DATE OF TISD: 24 January 1969
DATE OF PHOTOGRAPHY: 23 December 1965
DATE OF INTELLIGENCE REVIEW: 13 November 1968
5. LOCATION: 21-33-41N 105-51-03E, located 2.5 NM S of Thai Nguyen and 32 NM N of Ha Noi.
6. DESCRIPTION: The rail facility, oriented NW/SE, is 13,000' long and 1,900' wide, overall. A pair of dual gauge (meter and standard) tracks enter the SE end of the yard. One is from Kinh No and one is from Kep. A single meter gauge track extends NW from the yard, and terminates 7 NM to the NW. The installation contains 3 major areas. At the NW end, there is the turning wye (A) and its associated locomotive coaling tracks. Immediately to the SE is the car service area (B) with 4 spurs. The yard proper (C) is 22 tracks wide with 8 holding tracks (averaging 1,450' long), 10 classification tracks (averaging 2,150' long), 3 thru-access tracks, and a station track. Four reception sidings (D) are located immediately SE of the classification tracks.
7. SIGNIFICANCE: This yard functions as the classification and equipment service facility for trains serving the Thai Nguyen Iron and Steel Complex. There is no through traffic through the yard. All terminal activities probably take place within the iron and steel complex. Trains between Dong Dang and Yen Vien, via the standard gauge, alternate route, are probably relayed here.
8. TARGET ENVIRONMENT: Target, about 100' above sea level, is about 2.0 NM S of Thai Nguyen. Rolling, cultivated plains bounded by wooded hills extend 3.7 NM NE, 5.4 NM SW, and about 5.0 NM NW from target. Rolling plains contain many closely spaced hillocks, generally less than 60' higher than adjacent valley bottoms. Flat, cultivated flood plains of SE-flowing Song Cau extend SE of target for more than 10 NM. Song Cau 1.0 NM NE of target. Large industrial complex on SE edge of target.
9. DEFENSE ENVIRONMENT:
 - a. The target is within the SAM envelope.
 - b. AAA activity has been identified within 3 NM of the target.
 - c. HMG and small arms fire is anticipated.
10. DAMAGE OBJECTIVE:

Primary - Destruction of the turning wye, car servicing area, and the switches at each end of the yard and between the classification and reception tracks.

~~SECRET~~ NO FOREIGN DISSEM EXCLUDED FROM AUTOMATIC DOWNGRADING

A-H-BVN-2

(Revised by 15th Note to Holders)

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Appendix A

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Secondary - Destruction of the tracks, locomotives, and rolling stock within the yard.

11. EFFECT ON NVN: Destruction of this yard would disrupt operations of the adjacent iron and steel complex. However, recuperation of destroyed yard facilities is likely to be more rapid than recuperation of destroyed facilities within the complex itself. Operation of the standard gauge, alternate route between Dong Dang and Yen Vien, through Kep and Kinh No, would be hampered by destruction of the locomotive servicing facility here.

12. RECUPERABILITY:

a. Estimated capacity:

Thai Nguyen - Kep line (std. gauge) - 9 Trains/4,700 ST EWP/D

Thai Nguyen - Kinh No line (dual gauge) - 11 Trains/5,600 ST EWP/D

Thai Nguyen Yard - 11,000 ST/Day

b. Emergency facility: Since trains do not operate through the yard, no emergency bypass track would be attempted; capacity recovery and recuperation of equipment servicing facilities would be the first step.

c. Estimated capacity recovery:

3 days - 550 ST/Day

7 days - 1,100 ST/Day

10 days - 3,300 ST/Day

15 days - 4,400 ST/Day

30 days - 8,250 ST/Day

45 days - 10,450 ST/Day

Servicing facilities would require 1 to 2 months to achieve pre-attack operational capability. Telecommunications and signaling equipment would require 2 months to achieve pre-attack capability.

13. COLLATERAL DAMAGE:

a. Insignificant

Population				Casualties*			
Target Area		Adjacent Area		Target Area		Adjacent Area	
Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ
0	700	0	850	0	42	0	9

*Casualties estimated under daylight alert conditions.

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A-R-BVa-3

(Revised by 10th Note to Holders)

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Appendix A

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14. RECOMMENDED WEAPONS AND SORTIES:

This target is comprised of 4 areas, 3 of which have been weaponized. Weapons and sorties have been computed for each area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target are also shown:

(1) In order to achieve the required damage level weapons/sorties required over target:

Weapon:	250# <u>SNAKEYE</u> or	500# <u>SNAKEYE</u> or	500# <u>BOMB</u> or	750# <u>BOMB</u>
Area B-1 (640' x 185') Damage level 30%	31/3	16/2	33/4	20/3
Area C (4,000' x 685') Damage Level 12%	201/17	121/13	144/16	99/17
Area D (3,350' x 153') Damage Level 12%	47/4	29/3	65/7	45/8
Total:	279/24	166/18	242/27	164/28

(2) Weapons/Sorties operationally required to achieve "over target" requirements shown above:

Total:	335/28	200/22	291/32	197/33
--------	--------	--------	--------	--------

15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL:
50%.

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A-B-BVa-4

(Revised by 16th Note to Holders)

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Annex B to
Appendix A

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ANNEX C TO APPENDIX A

CATEGORY C

MILITARY INSTALLATIONS

~~TOP SECRET~~

A-C-1

Annex C to
Appendix A

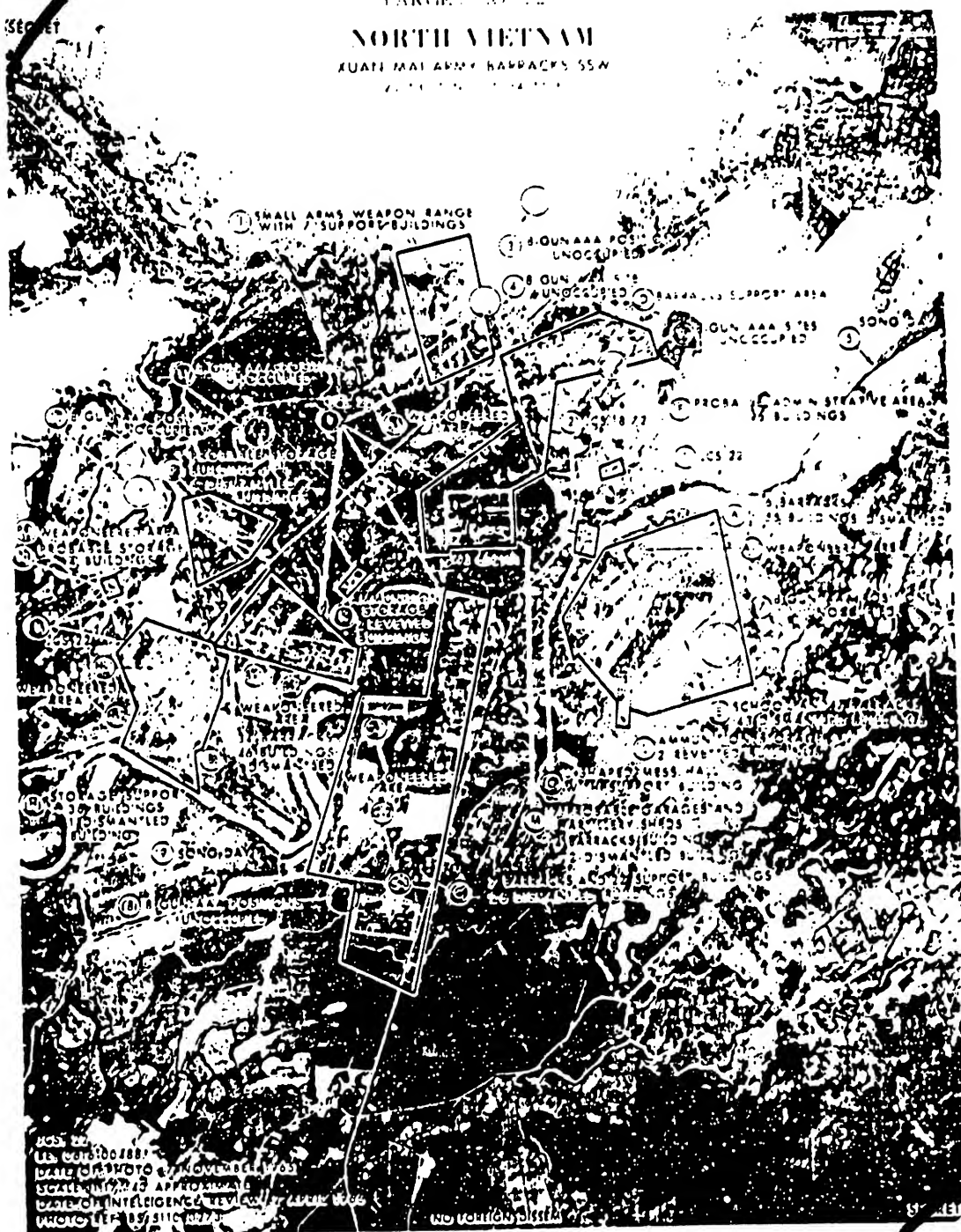
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ARGUMENT

NORTH VIETNAM

RUPTURE OF THE SPINE

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TOP SECRET

(Rev. 7-16-60)

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 22 1
2. BE NUMBER: 616-0488 2
3. IDENTIFICATION: Xuan Mai Army Barracks SSW. 3
4. DATE OF INFORMATION: 14 July 1966 4
DATE OF TIS: 5 August 1966 5
DATE OF PHOTOGRAPHY: 7 November 1965 6
DATE OF INTELLIGENCE REVIEW: 2 April 1966 7
5. LOCATION: 20-53-15N 105-34-55E, UTM WJ 602101 8
6. DESCRIPTION: This installation is spread over a wide area and is 9
bisected by the Song Day. Initially there were approximately 400 buildings in 10
the complex; however, many have been and are in the process of being 11
dismantled. Identified in the remaining buildings are approximately 53 12
barracks-type structures, 71 storage/support buildings, 6 administrative-type 13
buildings, 4 ammunition storage buildings and numerous other structures of 14
miscellaneous functions. The barracks-type buildings are in groups to which 15
various service schools have been assigned, i.e.: Intelligence, Engineer, 16
Signal, etc. There are athletic fields and training areas scattered throughout 17
the area. The troop capacity of this installation is estimated at approximately 18
5,300. 19
7. SIGNIFICANCE: This site was once the headquarters of the 338th 20
Infantry Brigade; however, it is believed that only elements of this unit 21
remain in this area. Reportedly, this installation is the site of a special 22
insurgency training center for large infiltration groups being deployed to 23
support VC and PL operations. 24
8. TARGET ENVIRONMENT: The camp is situated on Route 6 about 25
25 NM SW of Ha Noi in rolling lowland at the base of a mountain range. 26
Numerous rice fields and small farming villages are in the area. 27
9. DEFENSE ENVIRONMENT: 28
 - a. Nine SAM sites are identified within SA-2 missile range (17.5 NM) 29
of this target, and 16 additional sites have been identified 18-30 NM 30
distant. 31
 - b. Identified AAA activity in this area includes 5 active sites containing 32
40 occupied 57mm/85mm revetments and 14 inactive sites (95 unoccupied 33
37mm revetments and 8 unoccupied 57mm/85mm revetments). Five of 34
these sites are in the immediate vicinity of the target. (See JCS Target 35
Study annotated photography.) In addition, there are 11 sites 36
approximately 3 NM due north in the Hoa Muc area. These sites comprise 37
32 occupied and 54 unoccupied 57mm/85mm revetments. (DOI: 7 Nov 65, 38
3 Mar 66) Additional defenses now associated with the extensive Ha Noi 39
air defense complex can be deployed to this area within hours. 40

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A-C-A-2
(Revised by 9th Note to Holders)

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Appendix A

c. Intense HMG and small arms fire is anticipated throughout the target area.	1
	2
10. <u>DAMAGE OBJECTIVE:</u> Personnel casualties. Damage criterion is structural damage to barracks and administration buildings with accompanying casualties to personnel. Damage level is 30 per cent.	3
	4
	5
11. <u>EFFECT ON NVN:</u> Damage to this installation would affect the overall military capability of North Vietnam, interrupt training activities and close military support to VC/PL activities.	6
	7
	8
12. <u>RECUPERABILITY:</u> With a destruction level of 30 per cent it should take about five days to bring this installation up to normal operations. There is ample space for field billeting and temporary storage accommodations. Replacement of personnel and supplies could be accomplished within 36 hours.	9
	10
	11
	12
13. <u>COLLATERAL DAMAGE:</u>	13
a. Insignificant	14
b. Population Casualties*	15
Target Area Adjacent Area Target Area Adjacent Area	16
Mil Civ Mil Civ Mil Civ Mil Civ	17
8400 0 4100 400 504 0 41 4	18
*Casualties estimated under daylight alert conditions.	19
14. <u>RECOMMENDED WEAPONS AND SORTIES:</u>	20
This is a large target complex comprised of fourteen areas. Eleven areas (with 7 sub-areas) have been delineated for weapons application. Weapons and sorties have been computed for each area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target are also shown:	21
	22
	23
	24
	25
(1) in order to achieve a damage level of 30%, weapons/sorties required over target:	26
	27
WEAPON 250# SNAKEYE or 250# BOMB or 500# BOMB or 750# BOMB	
Area A-1 (200x250)	19/1 41/3 21/2 13/2 28
Area B-1 (350x800)	63/5 93/8 48/5 28/5 29
Area B-2 (400x900)	78/7 109/9 56/6 33/6 30
Area C-1 (200x450)	26/4 52/4 27/3 16/3 31
Area C-2 (200x550)	29/2 59/5 31/3 18/3 32
Area C-3 (450x700)	70/6 96/8 49/5 29/5 33

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A-C-A-3
(Revised by 9th Note to Holders)

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WEAPON	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	750# BOMB	
Area F (150x300)	17/2		41/3		21/2		13/2	1
Area H-1 (300x600)	44/4		70/6		36/4		21/3	2
Area H-2 (500x1500)	149/12		193/16		98/11		58/10	3
Area J-1 (200x650)	33/3		67/6		34/4		20/3	4
Area K (100x350)	16/1		50/4		50/6		50/8	5
Area L (50x350)	20/2		70/6		70/9		70/12	6
Area M (750x800)	126/10		150/13		77/9		45/7	7
Area N (100x250)	12/1		38/3		20/2		12/2	8
Area P-1 (200x300)	21/2		43/4		22/3		13/2	9
Totals	723/60		1172/98		660/73		439/73	10

(2) Weapons/sorties operationally required to achieve "over target" requirements shown above: 11
12

882/74 1429/120 805/90 535/90 13

(3) In order to achieve a damage level of 70%, weapons/sorties required over target: 14
15

WEAPON	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	750# BOMB	
Area A-1	65/5		138/11		71/8		44/8	16
Area B-1	212/18		314/26		162/18		95/16	17
Area B-2	263/22		368/31		189/21		112/19	18
Area C-1	88/7		176/15		91/10		54/9	19
Area C-2	98/8		199/16		109/12		61/10	20
Area C-3	236/20		324/27		166/18		98/16	21
Area F	58/5		139/12		71/8		44/7	22
Area H-1	149/12		236/20		122/13		71/12	23
Area H-2	503/42		652/54		331/37		196/33	24
Area J-1	112/9		226/19		115/13		68/11	25

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A-C-A-4
(Revised by 9th Note to Holders)

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Annex C to
Appendix A

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WEAPON	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	750# BOMB	
Area K	54/5		169/14		169/19		169/28	1
Area L	68/6		236/20		236/26		236/39	2
Area M	425/35		507/42		260/29		152/25	3
Area N	41/3		128/11		68/8		41/7	4
Area P-1	71/6		145/12		75/8		44/8	5
Totals	2443/203		3957/330		2235/248		1485/248	6

(4) Weapons/sorties operationally required to achieve "over target" requirements shown above: 7
8

2979/249 4826/403 2726/303 1811/302 9

15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50% 10

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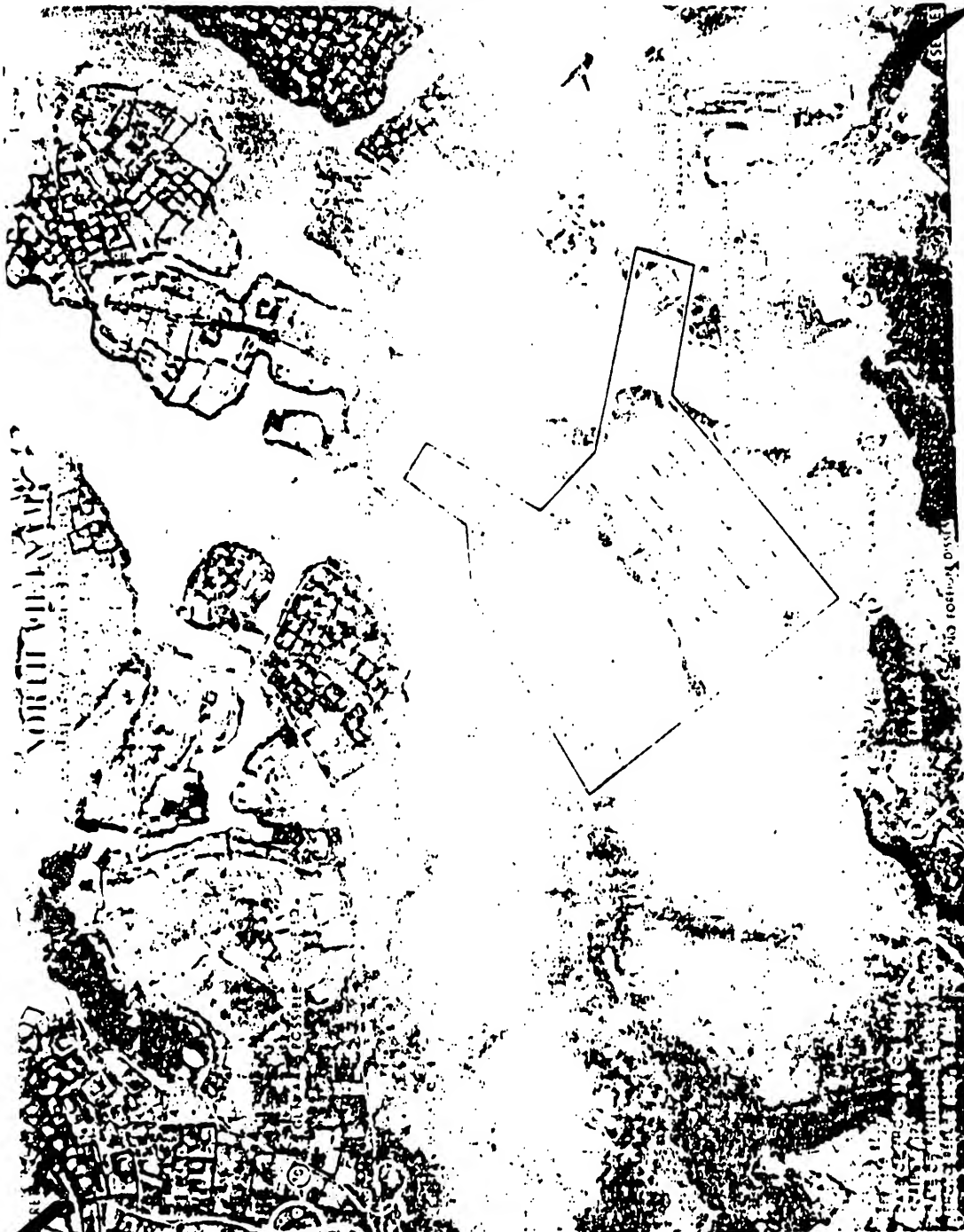
A-C-A-5
(Revised by 9th Note to Holders)

Tab A to
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TAB B TO ANNEX C TO APPENDIX A

TARGET NO. 23



~~TOP SECRET~~
Revised by 9th N/H)

A-C-B-1

Tab B to Annex C
to Appendix A

TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 23 1
2. BE NUMBER: 616-0277 2
3. IDENTIFICATION: Xuan Mai Army Barracks NNW, Hoa Muc 3
4. DATE OF INFORMATION: 14 July 1966 4
DATE OF TIS: 23 July 1966 5
DATE OF PHOTOGRAPHY: 15 October 1965 6
DATE OF INTELLIGENCE REVIEW: 28 November 1965 7
5. LOCATION: 20-57-04N 105-34-30E, UTM WJ 594162, 1 NM W of Hoa Muc. 8
9
6. DESCRIPTION: This installation comprises a large barracks area, 10
a small barracks area, and an ammunition storage site. The large barracks 11
area contains 9 barracks, 1 administration building, 3 mess halls, 7 12
possible vehicle storage buildings, 7 support structures, and 14 buildings 13
which are probably storage and/or unoccupied barracks. The ammunition 14
storage consists of 4 large and 2 small revetted structures. The small 15
barracks area contains 4 barracks buildings. 16
7. SIGNIFICANCE: This installation covers approximately 400 acres 17
and troop capacity is estimated at 1200 or two battalions. This camp, 18
together with Xuan Mai Army Barracks SSW (JCS Tgt #22 - BE 616-0489), 19
is reportedly the site of the special training center for infiltrators destined 20
to support PL/VC activities. The heavy concentration of AAA training sites 21
indicates emphasis on artillery training at this installation. 22
8. TARGET ENVIRONMENT: This camp is located in a rolling lowland 23
area in the Song Con valley. There are mountains to the west and south and 24
small agricultural villages are located to the northeast and east of the 25
target area. 26
9. DEFENSE ENVIRONMENT: 27
 - a. Twelve SAM sites have been confirmed within SA-2 missile range 28
(17.5 NM) of this facility and 14 sites are between 18 and 30 NM distant. 29
 - b. Identified AAA activity in this general area includes 4 active sites 30
containing 32 occupied 57mm/85mm revetments. There are also 7 31
inactive sites (54 unoccupied 57mm/85mm revetments). Additional 32
defenses are located 3 NM due south in the general Xuan Mai area and 33
comprise 5 active sites containing 40 occupied 57mm/85mm revetments 34
and 14 inactive sites (95 unoccupied 37mm revetments and 8 occupied 35
57mm/85mm revetments). (DOI: 3 March 1966) 36
 - c. Trenches and numerous AW sites surround the target area and 37
intense machine gun/small arms fire would probably be encountered. 38

~~TOP SECRET~~

A-C-B-2
(Revised by 9th Note to Holders)

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Appendix A

10. DAMAGE OBJECTIVE: Personnel casualties and destruction of stored ammunition. Damage criterion is structural damage to barracks, administration buildings, and ammunition storage buildings with accompanying personnel casualties and damage to stored ammunition. Damage level is 30 per cent.

11. EFFECT ON NVN: Destruction of this installation would temporarily disrupt training activities with a resultant reduction in support of VC/PL activities.

12. RECUPERABILITY: Assuming 30% destruction, it is estimated this training installation would be inoperable from 48 to 72 hours. Although limited training operations could be resumed in a relatively short time, full effectiveness could not be reached until new equipment could be obtained. Resupply might be delayed indefinitely if equipment is needed for troop use elsewhere.

13. COLLATERAL DAMAGE:

a. Insignificant.

Population				Casualties*			
Target Area		Adjacent Area		Target Area		Adjacent Area	
Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ
720	0	480	0	43	0	5	0

*Casualties estimated under daylight alert conditions.

14. RECOMMENDED WEAPONS AND SORTIES:

This target is comprised of three areas. Two areas (with 2 sub-areas - B-1 and B-2) have been delineated for weapons application. Weapons and sorties have been computed for each area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target are also shown:

(1) In order to achieve a damage level of 30%, weapons/sorties required over target:

WEAPON	250#	250#	500#	750#	
	SNAKEYE	or BOMB	or BOMB	or BOMB	
Area A (600x1100)	134/11	165/14	85/10	50/8	30
Area B (100x950)	22/2	64/6	64/7	64/11	31
Totals	156/13	229/20	149/17	114/19	32

(2) Weapons/sorties operationally required to achieve "over target" requirement shown above:

190/16	279/24	182/21	139/24	35
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A-C-B-3

(Revised by 9th Note to Holders)

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Annex C to
Appendix A

(3) In order to achieve a damage level of 70%, weapons, as required over target:

WEAPON	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	750# BOMB	
Area A	453/38		558/47		238/32		169/25	3
Area B	75/6		217/18		217/25		217/37	4
Totals	528/44		775/65		505/57		386/65	5

(4) Weapons/sorties operationally required to achieve "over target" requirement shown above:

644/54	945/79	616/69	471/79	8
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15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%

~~TOP SECRET~~

A-C-B-4

(Revised by 9th Note to Holders)

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Annex C to
Appendix A

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TAB C TO ANNEX C TO APPENDIX A

TARGET NO. 24



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Tab C to Annex C
to Appendix A

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TARGET INFORMATION AND STRIKE DATA

1. **TARGET NUMBER:** 30 1
2. **RE NUMBER:** 616-0202 2
3. **IDENTIFICATION:** Ha Noi Mil Hq N Vietnam Air Defense District 3
4. **DATE OF INFORMATION:** 14 July 1966 4
DATE OF TIS: 20 June 1966 5
DATE OF PHOTOGRAPHY: 30 December 1964 6
DATE OF INTELLIGENCE REVIEW: 16 April 1965 7
5. **LOCATION:** 21-01-50N 105-50-40E, UTM WJ 880260. 1,000 yds N of the Ha Noi RR station. 8
6. **DESCRIPTION:** Target is on the E side of Target #57, opposite the athletic field. It forms a rectangle containing a multi-story headquarters building (covering 6,075 sq ft of ground), 6 administration-type buildings, 6 support buildings and possibly small security buildings concealed by foliage. Barracks area and other facilities are part of JCS Target #57. 9
7. **SIGNIFICANCE:** This target, as a minimum, directs air defense in the Ha Noi Zone, including ground control intercept facilities and possibly fighter aircraft. In addition, it is believed to direct air defense at the national level and control assignment and disposition of AAA units of regimental and/or battalion size. All radar reports from filter centers are received and acted on at this headquarters. 10
8. **TARGET ENVIRONMENT:** Target is located within the heavily built-up area of the NVN capital city of Ha Noi, in the military complex of the Ministry of Defense. The Ha Noi railroad station is approximately 1,000 yds S, 2,000 yds E of the target. River 0:8 NM S is Bac Mai A/R. 11
9. **DEFENSE ENVIRONMENT:** 12
- a. Fifteen SAM sites have been identified within SA-2 missile range (17.5 NM) for the target, and 22 additional SAM sites have been identified 18-30 NM distant. 13
- b. Identified AAA activity within 3 NM of the target includes 18 active AAA sites, consisting of 67 occupied 57/85-mm revetments and 32 occupied 37-mm revetments. There are 9 inactive sites in the immediate area and a total of 55 active sites in the entire Ha Noi complex. (DOI: 4 July 1965 - 16 June 1966) 14
- c. Moderate to intense HMG and small arms fire is anticipated throughout the Ha Noi area. 15

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11. EFFECT ON NVN: Will reduce North Vietnamese military immediate support and control of the VC. Reduces the overall military capability of the NVN.

12. RECUPERABILITY: With 30% destruction achieved, it would probably be only 24-36 hours to resume near normal operations. Some large concentration of troops and material are in the Dong Ha area.

13. COLLATERAL DAMAGE:

a. None

b. Population

Casualties

Target Area		Adjacent Area		Target Area		Adjacent Area	
Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ
1750	0	250	0	105	0	3	0

*Casualties estimated under daylight alert conditions.

14. RECOMMENDED WEAPONS AND SORTIES:

This target complex is comprised of three areas. Weapons and sorties have been computed for each area. To show the effort required to achieve the damage level prescribed, total weapons and sorties required over the target are also shown:

(1) In order to achieve a damage level of 30%, weapons and sorties required over target:

WEAPON	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	750# BOMB
Area A (100x500)	18/1		52/4		27/3		16/3
Area B (50x250)	10/1		57/3		19/2		11/2
Area C	21/2		63/4		22/2		13/2
Totals	49/4		132/11		68/7		40/7

(2) Weapons/sorties operationally required to achieve "over target" requirement shown above:

60/5	161/13	83/9	49/8
------	--------	------	------

(3) In order to achieve a damage level of 70%, weapons and sorties required over target:

WEAPON	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	750# BOMB
Area A	61/5		175/15		91/10		54/9
Area B	34/3		125/10		64/7		37/6
Area C	71/6		145/12		74/8		44/7
Totals	166/14		445/37		229/25		135/22

(4) Weapons/sorties operationally required to achieve "over target" requirement shown above:

202/17	543/45	279/31	161/28
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15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%.

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(Revised by 7th Note to Holders)

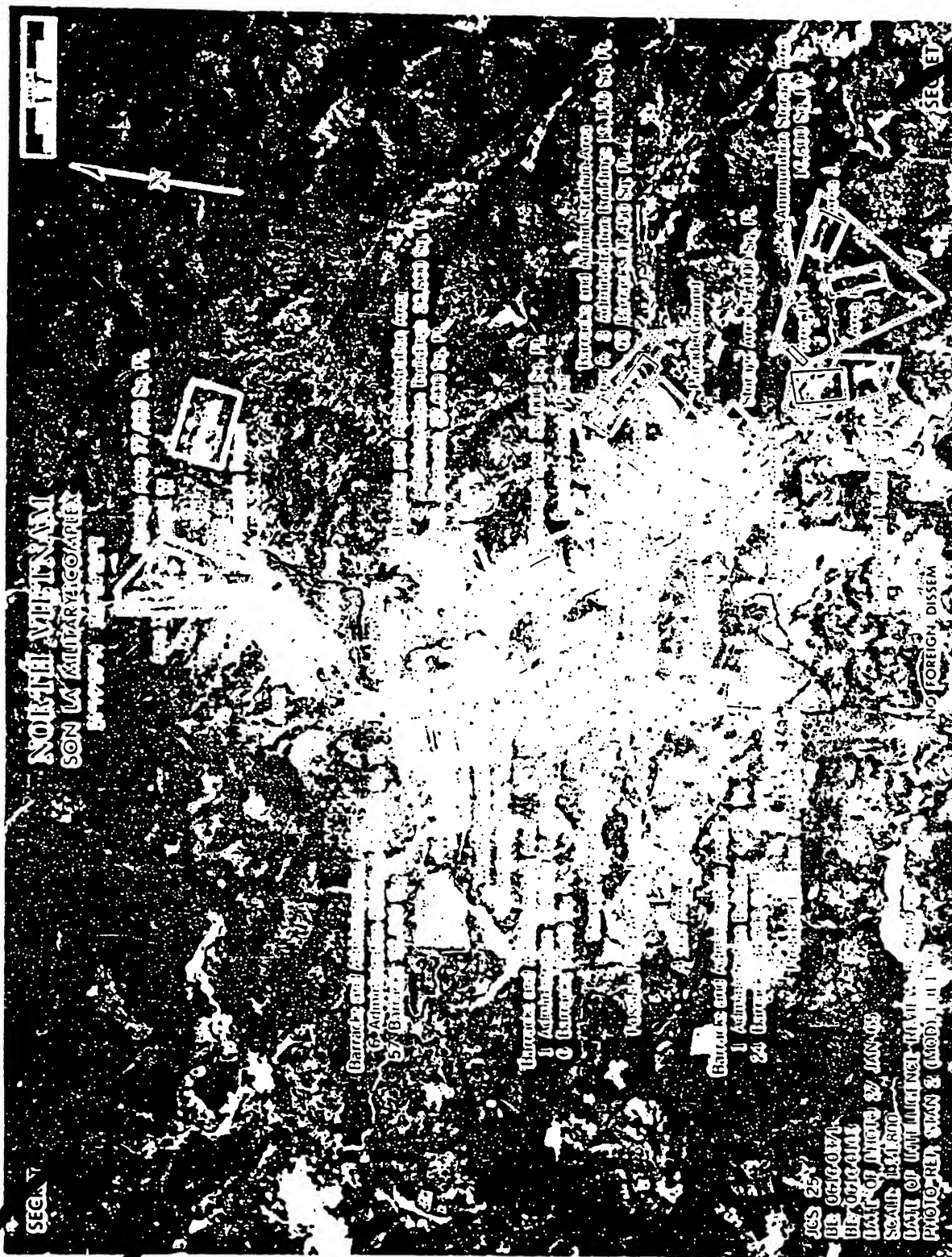
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Appendix

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TAB D TO ANNEX C TO APPENDIX A

TARGET NO. 2



1. SEC. 7

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 25 1
2. BE NUMBERS: 616-0371 2
616-0103 3
3. IDENTIFICATION: Son La Army Barracks, Hq Military 4
Region NW, and Supply Depot. 5
4. DATE OF INFORMATION: 7 May 1965 6
DATE OF TIS: 16 June 1965 7
DATE OF PHOTOGRAPHY: 27 January 1965 8
DATE OF INTELLIGENCE REVIEW: 5 March 1965 9
5. LOCATION: 21-19-50N, 103-54-32E, UTM UJ 868590, 10 NM 10
NW of Na San Airfield on Route 6. 11
6. DESCRIPTION: This target is centered at the junction 12
of Route 6 and an improved road running N at Son La 13
(UJ 868590) and trends generally N/S over a wide area. South 14
of the route junction are located barracks areas primarily, 15
as well as an ammo storage area and the probable location of 16
an artillery school. To the north is a large area of 17
administrative-type buildings and storage warehouses. Within 18
the total complex is a probable prison and a weather station. 19
Over-all there are approximately 600 structures including 20
six or more under construction. Buildings include 17 21
barracks-type buildings, 72 storage buildings, 15 administra- 22
tive buildings, a revetted probable explosives storage 23
buildings, 10 mess halls, a weather station, an amphitheater, 24
and 350 or more storage/support-type buildings of various 25
sizes. There is some underground POL storage. 26
7. SIGNIFICANCE: This area is reported to contain the 27
Headquarters, Military Region Northwest, major elements and 28
possibly the headquarters of the 335th Infantry Brigade, and 29
possibly an artillery school. Brigade supply depot and Mk 30
Northwest supply center may be located here. 31
8. TARGET ENVIRONMENT: Target complex lies along Route 6 32
in partially wooded, partially cultivated hill country about 33
10 NM SW of the Black River. Numerous small native farming 34
villages are nearby along the banks of the Nam Lai which 35
flows through the area, crossing Route 6 near the center of 36
the target. 37
9. DEFENSE ENVIRONMENT: 38
 - a. In the target area there are 3 light (14.5mm-37mm) 39
AAA sites, containing 14 positions, 10 (possibly all 14) 40
of them occupied. At Na San, 10 NM SE are 2 occupied 41
light 4-position sites, and 3 unoccupied sites of 12 42
positions as well as an unoccupied possible medium site 43
of 8 positions. 44
 - b. There is an EW radar at Son La and the target is 45
also in range of the height finder and EW radar at Ban 46
Xom Lom and EW radar at Dien Bien Phu. 47
 - c. Ground defenses include up to 3 battalions of 48
infantry with supporting AW units and possibly artillery 49
in up to battalion strength. 50

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10. DAMAGE OBJECTIVE: Destruction of administration and storage buildings of Military Region Northwest and destruction of barracks and support areas, including ammo storage, of the 335th Brigade. Damage level is 30 per cent.

11. EFFECT ON DRV: Will reduce Military Region Northwest support to 316th Brigade at Dien Bien Phu and DRV support to PL and to PAVN units in Laos. Will reduce over-all military capability of 335th Brigade.

12. RECUPERABILITY: Supply warehouses and headquarters operations could probably begin functioning on a limited basis in from 42 to 78 hours. Replacement of supplies would depend on national priorities and might take two to three weeks if other areas had also been destroyed.

13. COLLATERAL DAMAGE: Insignificant.

14. RECOMMENDED WEAPONS AND SORTIES:

This is a large target complex comprised of twenty-four areas. Weapons and sorties have been computed for each area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target is also shown.

(1) In order to achieve a damage level of 30 per cent, weapons/sorties required over target:

WEAPON:	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	750# BOMB	
Area A	70/6		108/9		56/6		33/6	23
Area B	45/4		65/5		33/4		20/3	24
Area C	38/3		77/6		39/4		23/4	25
Area D	71/6		103/9		53/6		31/5	26
Area E	98/8		142/12		73/8		43/7	27
Area F	26/2		52/4		27/3		16/3	28
Area G	73/6		104/9		54/6		32/5	29
Area H	81/7		129/11		129/14		129/22	30
Area I	92/8		157/15		157/16		157/26	31
Area J	88/7		134/11		134/15		134/22	32
Area K	45/4		66/5		34/4		20/3	33
Area L	46/4		80/7		41/5		24/4	34
Area M	38/3		69/6		35/4		21/4	35
Area N	98/8		149/12		76/8		45/8	36
Area O	42/3		60/6		35/4		21/3	37
Area P	38/3		60/5		31/3		18/3	38

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WEAPON:	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	750# BOMB	
Area Q	110/9		140/12		72/8		42/7	1
Area R	117/10		156/13		80/9		47/8	2
Area S	105/9		130/11		67/7		39/6	3
Area T	47/4		72/6		37/4		22/4	4
Area U	55/5		95/8		49/5		29/5	5
Area V	35/3		58/5		30/3		18/3	6
Area W	78/6		98/8		50/6		30/5	7
Area X	60/5		115/10		59/7		35/6	8
TOTALS	1596/133		2419/203		1451/161		1029/172	9

(2) Weapons/sorties operationally required to achieve "over target" requirement shown above:

1913/159 2950/246 1770/197 1255/209

(3) In order to achieve a damage level of 70% weapons/sorties required over target:

WEAPON:	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	750# BOMB	
Area A	236/19		394/30		189/21		112/19	15
Area B	152/12		219/13		112/13		68/11	16
Area C	128/10		270/22		132/15		78/13	17
Area D	240/20		347/29		179/20		105/18	18
Area E	331/27		478/40		246/27		145/24	19
Area F	88/7		175/14		91/10		54/9	20
Area G	246/21		350/29		182/20		108/18	21
Area H	273/23		435/36		435/48		435/73	22
Area I	310/26		528/4		528/59		528/88	23
Area J	297/25		452/38		452/50		452/75	24
Area K	152/13		223/19		115/13		68/11	25
Area L	155/13		270/23		138/15		81/13	26
Area M	128/11		233/19		118/13		71/12	27
Area N	331/28		502/42		257/29		152/25	28
Area O	142/12		233/19		118/13		71/12	29
Area P	128/11		203/17		105/12		61/10	30

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WEAPON:	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	750# BOMB	
Area Q	110/9		140/12		72/8		42/7	1
Area R	117/10		156/13		80/9		47/8	2
Area S	105/9		130/11		67/7		39/6	3
Area T	47/4		72/6		37/4		22/4	4
Area U	55/5		95/8		49/5		29/5	5
Area V	35/3		58/5		30/3		18/3	6
Area W	78/6		98/8		50/6		30/5	7
Area X	60/5		115/10		59/7		35/6	8
TOTALS	1596/133		2419/203		1451/161		1029/172	9

(2) Weapons/sorties operationally required to achieve "over target" requirement shown above: 10
11

1913/159 2950/246 1770/197 1255/209 12

(3) In order to achieve a damage level of 70% weapons/sorties required over target: 13
14

WEAPON:	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	750# BOMB	
Area A	236/19		394/30		189/21		112/19	15
Area B	152/12		219/18		112/13		68/11	16
Area C	128/10		270/22		132/15		78/13	17
Area D	240/20		347/29		179/20		105/18	18
Area E	331/27		478/40		246/27		145/24	19
Area F	88/7		175/14		91/10		54/9	20
Area G	246/21		350/29		182/20		108/18	21
Area H	273/23		435/36		435/48		435/73	22
Area I	310/26		528/4		528/59		528/88	23
Area J	297/25		452/38		452/50		452/75	24
Area K	152/13		223/19		115/13		68/11	25
Area L	155/13		270/23		138/15		81/13	26
Area M	128/11		233/19		118/13		71/12	27
Area N	331/28		502/42		257/29		152/25	28
Area O	142/12		233/19		118/13		71/12	29
Area P	128/11		203/17		105/12		61/10	30

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WEAPON:	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	750# BOMB	
Area Q	472/39		370/31		193/21		111/19	1
Area R	394/33		525/44		270/30		158/26	2
Area S	354/30		438/37		226/25		132/22	3
Area T	159/13		243/20		125/14		74/12	4
Area U	185/15		320/27		165/18		98/16	5
Area V	118/10		196/16		101/11		61/10	6
Area W	263/22		330/28		169/19		101/17	7
Area X	202/17		387/32		199/22		118/20	8
TOTALS	5484/457		8091/674		4845/538		3442/573	9

(4) Weapons/sorties operationally required to achieve "over target" requirement shown above: 10
11

6690/557 9871/822 5911/656 4199/699 12

15. PROBABILITY OF ACHIEVING DAMAGE CRITERION: 50% 13

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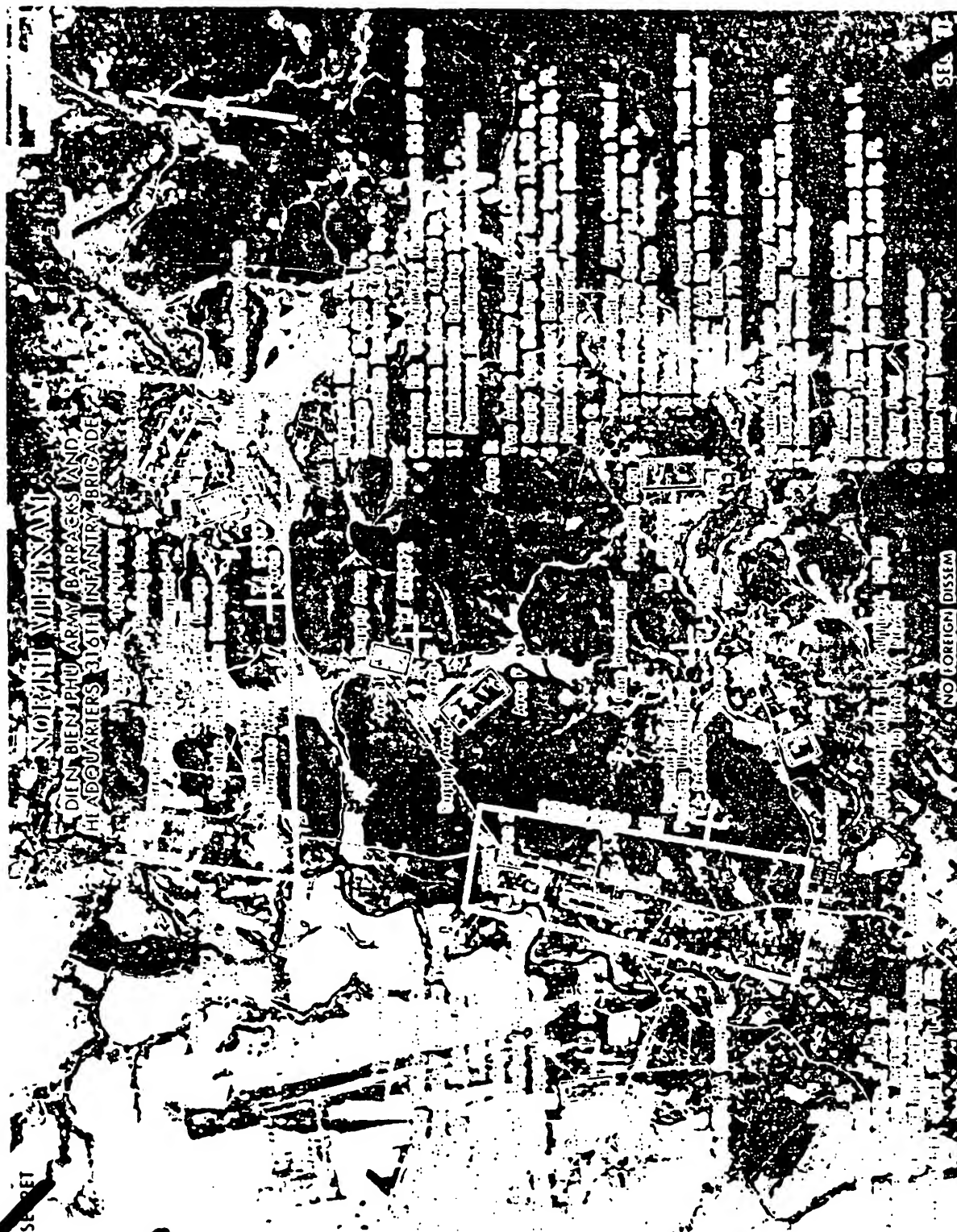
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TABLE E TO ANNEX C TO APPENDIX A

TARGET NO. 20



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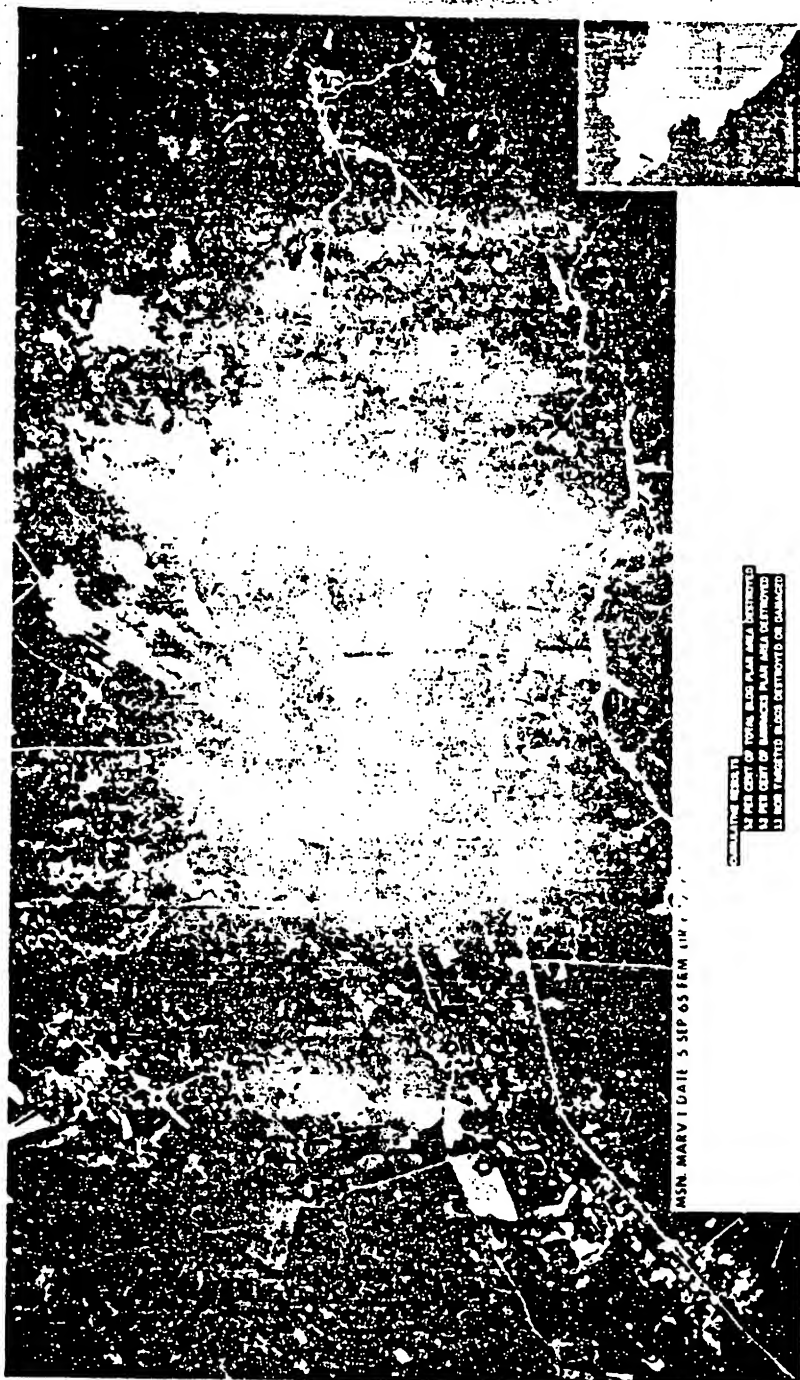
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TAB E TO ANNEX C TO APPENDIX A

TARGET NO. 76

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NO 113 71

JCS 26
NORTH VIETNAM
DIEN BIEN PHU ARMY BKS AND HQS
21 21 55N 103 00 51E



COMBAT DAMAGE
10 PER CENT OF TOTAL BKS PLAN AREA DESTROYED
10 PER CENT OF ARMY BKS PLAN AREA DESTROYED
10 PER CENT OF ARMY BKS PLAN AREA DESTROYED

MSN MARV DAIL 5 SEP 65 1500 11E



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NO 113 71

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Classified by 6th N/II)

A-C-E-1b

Tab E to Annex C
to Appendix A

1947 RV-2

TARGET INFORMATION AND ANALYSIS

1. TARGET NUMBER: 100
2. BE NUMBER: 610-0171
3. IDENTIFICATION: Dien Bien Phu Army Barracks
4. DATE OF INFORMATION: 1 July 1965
DATE OF TEL: 20 August 1965
DATE OF PHOTOGRAPHY: 2 July 1965
DATE OF INTELLIGENCE REVIEW: 6 July 1965
5. LOCATION: 21-21-55 103-00-51E and 21-23-22N 102-01-12E, UTM's TJ 940636 and TJ 943658, extending N and S along Route 6 at Dien Bien Phu.
6. DESCRIPTION: This target is part of the largest military complex in northwestern North Vietnam, extending possibly 8 NM along Route 6 through an area 1 NM wide. The 316th Infantry Brigade Hq is believed located in three new multi-story administration buildings located along the W side of Route 6, 700 yards directly E of SE end of A/P runway. This area contains 11 administration buildings, 21 barracks, and 16 storage/support type buildings. Approximately one NM north is an area oriented E-W which appears to be an administrative support and training area. The total headquarters complex includes 126 major buildings and several scattered support buildings. The main barracks area extends S along Route 6 for about 2 NM from Brigade Hq, the major groupings of buildings being directly adjacent to the road. Separate company and battalion size areas are located 1/2 to 1 NM N and W of the main complex. Approximately 15 NM S of the barracks area are two additional groups of buildings, but they appear to be estate farms and not part of the target. Within the specified target area, there are approximately 27 structures of interest (14 barracks, 10 administration buildings, 2 storage/support buildings). Total troop capacity is estimated at 10,000.
7. SIGNIFICANCE: A dependency for the 316th Infantry Brigade and reported training area for units in the support battalions. 1 NM E of Laotian border and 1/2 NM from border via Route 6. Site of historic defeat of French.
8. TARGET ENVIRONMENT: Target is situated along an improved all-weather road (Route 6) through Dien Bien Phu in the valley of the Nam Yom (river) which extends to a width of about 1/2 NM each side of the river. To the E rugged wooded hills rise to a height of over 4,000 feet and the 3,000 ft contour parallels the targets at a distance of about 1 NM. To the W, across the Nam Yom, the slopes rise somewhat more gradually. Throughout the valley the land is under extensive cultivation and numerous hut villages are close by, and sometimes within, the target areas.

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9. DEFENSE ENVIRONMENT: There are three active light (14.5mm-37mm) AAA sites at Dien Bien Phu containing four occupied positions each. There are also three inactive sites containing 12 unoccupied positions. (DOI: 13 March 1965) There are four EW radars located in the area. Operational units appear in an active training status and many A/W positions have been prepared. Much A/W and small arms fire can be anticipated.

10. DAMAGE OBJECTIVE: Personnel casualties. Damage criterion is destruction of administration and storage buildings of the 316th Infantry Brigade and destruction of barracks and support areas with accompanying personnel casualties. Damage level is 30%.

11. EFFECT ON DRV: Will reduce 316th Brigade capability to support P/L with trained units and/or supplies.

12. RECUPERABILITY: Headquarters and supply operations could probably begin functioning on a limited basis in from 24 to 48 hours. Replacement of supplies might take 2 or 3 weeks if other areas in northwest MR were also destroyed, depending on national priorities.

13. COLLATERAL DAMAGE: Moderate damage to surrounding area.

14. RECOMMENDED WEAPONS AND SORTIES:

This is a large target complex comprised of twenty-one areas. Weapons and sorties have been computed for each area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target is also shown.

(1) In order to achieve a damage level of 30%, weapons/sorties required over target:

WFAPON	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	750# BOMB	
Area A	73/6		108/9		56/6		33/6	30
Area B	95/8		124/10		64/7		37/6	31
Area C	55/5		75/6		39/4		23/4	32
Area D	76/6		128/11		66/7		39/7	33
Area E	40/3		64/5		33/4		20/3	34
Area F	82/7		115/10		59/7		35/6	35
Area G	57/5		85/7		44/5		26/4	36
Area H	64/5		129/11		76/8		53/9	37
Area I	49/4		81/7		42/5		25/4	38
Area J	44/4		64/5		33/4		20/3	39
Area K	33/3		79/7		47/5		32/5	40

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WEAPON	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	750# BOMB	
Area L	75/6		106/9		54/6		32/5	1
Area M	101/8		137/11		71/8		42/7	2
Area N	150/13		184/15		95/11		55/9	3
Area O	248/21		278/23		142/16		84/14	4
Area P	188/16		219/18		113/13		66/11	5
Area Q	165/14		199/17		102/11		60/10	6
Area R	59/5		78/7		40/4		24/4	7
Area S	50/4		77/6		40/4		23/4	8
Area T	67/6		90/8		47/5		27/5	9
Area U	109/9		137/11		71/8		42/7	10
Totals	1880/157		2557/213		1334/148		788/131	11

(2) Weapons/sorties operationally required to achieve "over target" requirement shown above:

2293/191 3118/260 1627/180 961/160 14

(3) In order to achieve a damage level of 70%, weapons/sorties required over target: 15
16

WEAPON	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	750# BOMB	
Area A	246/21		364/30		189/21		111/17	17
Area B	320/27		418/35		216/24		125/21	18
Area C	185/15		253/21		132/15		78/13	19
Area D	256/21		431/36		222/24		132/22	20
Area E	135/11		216/18		111/12		68/11	21
Area F	276/23		388/32		198/22		118/20	22
Area G	192/16		287/24		148/16		88/15	23
Area H	216/18		435/36		256/28		179/30	24
Area I	165/14		274/23		142/16		85/14	25
Area J	148/12		216/18		111/12		68/11	26
Area K	111/9		266/22		159/18		108/18	27
Area L	253/21		358/30		182/20		108/18	28
Area M	340/28		461/38		239/27		142/24	29
Area N	505/42		619/52		320/36		185/31	30

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WEAPON	250# <u>SNAKEYE</u>	or	250# <u>BOMB</u>	or	500# <u>BOMB</u>	or	750# <u>BOMB</u>	
Area O	837/70		936/78		478/46		283/47	1
Area P	633/53		738/62		380/42		222/37	2
Area Q	556/46		670/56		344/38		202/34	3
Area R	199/17		263/22		135/15		81/14	4
Area S	169/14		260/22		135/15		78/13	5
Area T	226/19		303/25		159/18		91/15	6
Area U	367/31		461/38		240/27		142/24	7
Totals	6335/528		8617/635		4556/506		2686/444	8

(4) Weapons/sorties operationally required to
achieve "over target" requirement shown above: 9
10

7726/644 10509/774 5556/610 3275/548 11

15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%. 12

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(Revised by 6th Note to Holders - 25 March 1966)

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TAB G TO ANNEX C TO APPENDIX A

TARGET NO. 28



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Tab G to Annex C
to Appendix A

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 28 1
2. BE NUMBER: 616-0129 2
3. IDENTIFICATION: Ban Xom Lom Army Barracks 3
4. DATE OF INFORMATION: 17 April 1965 DATE OF TIS: 4
1965 5
5. LOCATION: 20-49-104-4-1 VJ at Ban Xom 6
Lom 15 NM SW of the Black River, and 11 NM NE of Laos border. 7
6. DESCRIPTION: Target Area is generally oriented east 8
west along Route 6 at Ban Xom Lom and consists of small 9
groupings of barracks, support areas and motor pools scat- 10
tered on both sides of the highway. 14 JCS target locations 11
have been designated containing approximately 140 barracks/ 12
administrative type buildings and about 100 storage/support 13
buildings, including motor pools. Other small support 14
buildings singly or in small groups are located throughout 15
the area. Estimated barracks capacity is 10,000 troops. 16
Cloud cover prohibits interpretation of about 10 percent of 17
the area. 18
7. SIGNIFICANCE: This area has been reported to contain 19
Hqs and operational elements of the 335th Brigade. EW and 20
HP radars are also reported in the area although not identified 21
on photography. 22
8. TARGET ENVIRONMENT: The complex is surrounded by low 23
wooded hills on 3 sides. To the west is rolling farmland. 24
About 6 NM west along Route 6 is the Moc Chau military area 25
reportedly used for infiltration training. 26
9. DEFENSE ENVIRONMENT: 27
 - a. In the target area are 2 occupied AAA sites. One 28
is a 4-position, probably medium (57mm-82mm) site and the 29
other is a 4-position light (14.5mm-37mm) site. There are 30
also 4 light unoccupied positions. (DOI: 22 and 30 31
January 1965) 32
 - b. A height finder and an EW radar are at Ban Xom Lom. 33
Target is in range of GCI at Hanoi and EW radars at Na 34
San and Son La. 35
 - c. Evidence of extensive training in the area. There 36
are several trenches and revetments throughout the target 37
complex and in addition to identified AAA positions there 38
are many AW positions. Elements of the 335th brigade have 39
been reported in this area. 40
10. DAMAGE OBJECTIVE: Casualties to personnel. Damage 41
criterion is structural damage to administration and storage 42
buildings in the area and destruction of barracks and support 43
facilities with accompanying casualties to personnel. 44
Damage level is 30 percent. 45

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11. EFFECT ON DRV: Will reduce support to infiltration training and training of units primarily in support of Pathet-Lao. Will reduce military capability of 335th brigade.

12. RECUPERABILITY: Operations could begin to resume in 12-24 hours. Personnel could be quartered under canvas if necessary but there would probably be sufficient room in remaining buildings. Supply replacement could be effected in 5-7 days if priorities warrant.

13. COLLATERAL DAMAGE: Insignificant.

14. RECOMMENDED WEAPONS AND SORTIES:

a. This is a large target complex comprised of 14 areas. Weapons and sorties have been computed for each area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target is also shown.

(1) In order to achieve a damage level of 30%, weapons/sorties required over target:

Weapon	250# <u>SNAKEYE</u>	or	250# <u>BOMB</u>	or	500# <u>BOMB</u>	or	750# <u>BOMB</u>
Area A	57/5		86/7		44/5		26/4
Area B	118/10		154/13		79/9		46/8
Area C	39/3		60/5		31/4		18/3
Area D	55/4		75/6		39/4		23/4
Area E	68/6		104/8		53/6		31/5
Area F	61/5		84/7		43/5		25/4
Area G	137/11		178/15		91/10		54/9
Area H	165/13		200/16		102/11		60/10
Area I	39/3		69/6		36/4		21/4
Area J	79/7		116/10		60/7		35/6
Area K	31/3		57/5		29/3		17/3
Area L	73/6		110/11		57/6		33/6
Area M	82/7		115/10		59/7		35/6
Area N	31/3		57/5		29/3		17/3
Totals	1035/86		1465/122		752/84		441/74

(2) Weapons/sorties operationally required to achieve "over target" requirement shown above:

1262/105	1287/149	917/102	538/90
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(3) In order to achieve a damage level of 70%,
weapons/sorties required over target:

Weapon: 250# SNAKEYE or 250# BOMB or 500# BOMB or 750# BOMB

Area A	193/16	290/24	149/16	88/14	3
Area B	397/33	518/43	268/30	155/26	4
Area C	131/11	203/17	105/12	61/10	5
Area D	185/15	252/21	131/15	78/13	6
Area E	229/19	350/29	178/20	105/17	7
Area F	205/17	283/24	145/16	85/14	8
Area G	461/38	600/50	306/34	182/30	9
Area H	555/46	673/56	343/38	202/34	10
Area I	132/11	233/19	122/14	71/12	11
Area J	266/22	390/33	202/23	118/20	12
Area K	105/9	192/16	98/11	58/10	13
Area L	246/21	370/31	192/21	112/19	14
Area M	276/23	387/32	199/22	118/20	15
Area N	105/9	192/16	98/11	58/10	16
Totals	3486/290	4933/411	2536/282	1491/249	17

(4) Weapons/sorties operationally required to achieve
"over target" requirement shown above:

4253/355 5018/501 3093/344 1818/304 20

15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50% 21

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TAB H TO ANNEX C TO APPENDIX A
TARGET NO. 29



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NO FOREIGN DISSEM

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to Appendix A

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 29 1
2. BE NUMBER: 616-0273 2
3. IDENTIFICATION: Quang Suoi Army Barracks NE 3
4. DATE OF INFORMATION: 19 March 1965 4
DATE OF TIS: 19 April 1965 5
5. LOCATION: 20-10-40N/105-54-35E, UTM WH 947313, 2 NM 6
NE of Quang Suoi, 6 NM SW of Ninh Binh. 7
6. DESCRIPTION: Oriented primarily N-S on a loose surface, 8
graded, all-weather road and within 2 NM of Route 1. Head- 9
quarters and administration area are on S side of road and 10
troop areas, support and storage areas (including ammo 11
storage) and training areas are north of road. Area includes 12
20 barracks-type buildings, 5 administration-type buildings, 13
approximately 40 storage/support buildings including 5 dis- 14
persed buildings in a fenced area that may be ammo storage. 15
There is a motor pool and numerous small support buildings 16
and ammo shed. Troop capacity may be 2000 - 2500. 17
7. SIGNIFICANCE: Target appears to be a regimental head- 18
quarters, probably containing elements of the 304th Infantry 19
Division. Can control traffic on and defend approaches 20
along Route 1 and railroad from Vinh. 21
8. TARGET ENVIRONMENT: Nestled among low hills. 890 ft. 22
hill 3.7 NM SSE; 500 ft. hill 2.7 NM N and hills to 330 ft. 23
immediately surrounding area. Nearest heavy populated town 24
is Ninh Binh 6 NM NE of Song Day. Elevations are generally 25
karsh (limestone ridges) and caves may be prevalent in the 26
area. 27
9. DEFENSE ENVIRONMENT: 28
 - a. Within the target area there is an inactive 57mm/85mm 29
AAA site with 2 unoccupied positions. At Quang Suoi 2 NM 30
SW are 2 inactive 14.5mm/37mm sites with 11 unoccupied 31
positions and 2 inactive 12.7 AW sites with 14 unoccupied 32
positions. Nearest occupied AAA is at Bien Son, 8 NM SW 33
where there are 6 active 14.5mm-37mm sites including 34
19 occupied positions. Nearest active medium (57mm-85mm) 35
sites are at Nam Dinh, 21 NM NE and Thanh Hoa, 25 NM S. 36
 - b. Target is within the capabilities of EW radars of 37
Thanh Hoa and Nam Dinh. 38
 - c. 304th Inf Div headquarters have been reported in the 39
area south of Nam Dinh and a regiment appears located in 40
the target area. Heavy AW and small arms fire can be 41
anticipated. 42

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Appendix A

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10. DAMAGE OBJECTIVE: Personnel casualties. Damage criterion is structural damage to administration, barracks and support buildings including possible ammo storage with accompanying casualties to personnel. Damage level is 30 percent. 1
2
3
4
5

11. EFFECT ON NVN: Thirty percent damage level would reduce effectiveness of troops in defense of approaches to Hanoi from the south and slow possible deployment into South Vietnam. 6
7
8

12. RECUPERABILITY: Barracks area could probably be operational within 6 - 12 hours. Destroyed storage could be replaced in 24 - 48 hours, if required. 10
11
12

13. COLLATERAL DAMAGE: Insignificant. 13

14. RECOMMENDED WEAPONS AND SORTIES: 14

a. This is a large target complex comprised of three areas. Weapons and sorties have been computed for each area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target is also shown. 15
16
17
18
19

(1) In order to achieve a damage level of 30% weapons/sorties required over target: 20
21

Weapon:	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	750# BOMB	
Area A	51/4		76/6		35/4		21/4	22
Area B	51/4		76/6		35/4		21/3	23
Area C	36/3		57/5		28/3		17/3	24
TOTALS:	138/11		209/17		98/11		59/11	25

(2) Weapons/sorties operationally required to achieve "over target" requirement shown above: 26
27

168/13 255/21 120/13 72/13 28

(3) In order to achieve a damage level of 70% weapons/sorties required over target: 29
30

Weapon:	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	750# BOMB	
Area A	169/14		240/20		120/13		70/12	31
Area B	169/14		240/20		120/13		70/12	32
Area C	121/10		190/16		94/1		57/9	33
TOTALS:	459/38		670/56		334/33		197/34	34

(4) Weapons/sorties operationally required to achieve "over target" requirement shown above: 35
36

560/46 817/68 407/40 240/41 37

15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%. 38

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(Revised by 7th Note to Holders)

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COPY NO.

194

REVISION OF APPENDIX A TO ENCLOSURE A

TO

JCS 2343/383-2

VOLUME II

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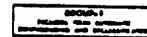
TAB J TO ANNEX C TO APPENDIX A

TARGET NO. 31

NORTH VIETNAM

HA DONG ARMY BARRACKS AND SUPPLY DEPOT

20 58 51 N 103 47 42 E



1. JCS, 31

A. STORAGE/SUPPORT AREA: CONTAINS 3 STORAGE BUILDINGS, 2 BARRACKS, 4 SUPPORT BUILDINGS

B. BARRACKS AREA: CONTAINS 6 BARRACKS,

2 ADMINISTRATIVE BUILDINGS, 1 AUD/GYM, 3 MESS HALLS, 7 SUPPORT BUILDINGS

C. BARRACKS AREA: CONTAINS 4 BARRACKS, 1 ADMINISTRATIVE BUILDING, 1 AUD/GYM, AND 1 MESS HALL

D. BARRACKS AREA: 6 BARRACKS, 1 MESS HALL, AND 14 SUPPORT BUILDINGS

E. STORAGE AND SUPPORT AREA: CONTAINS 4 STORAGE BUILDINGS, 2 BARRACKS, 1 MESS HALL, 33 STORAGE AND SUPPORT BUILDINGS, AND VEHICLE PARKING AREA

F. BARRACKS AREA: CONTAINS 6 BARRACKS, 1 MESS HALL, 9 SUPPORT BUILDINGS

G. ADMINISTRATIVE AREA: CONTAINS 6 ADMINISTRATIVE BUILDINGS, 1 AUD/GYM, 2 SUPPORT BUILDINGS

H. BARRACKS AREA: 19 BARRACKS, 1 ADMINISTRATIVE BUILDING, 1 MESS HALL, 10 STORAGE AND SUPPORT BUILDINGS

I. BARRACKS AREA: 27 BARRACKS, 3 MESS HALLS, 2 ADMINISTRATIVE BUILDINGS, 1 SUPPORT BUILDING

J. STORAGE AND SUPPORT BUILDINGS

K. POSITION, OCC

L. POSITION, OCC

JCS, 31

EE: 0016 0016 0016 0016

DATE OF PHOTO: 2 DECEMBER 1960

SCALE: VARIABLE

DATE OF INTELLIGENCE REVIEW: 21 JULY 1968

PHOTO REFERENCE: UE 750 R/PAN 012

NO FOREIGN DISSEM

SECRET

Used by 15th N/H)

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Tab J to Annex
to Appendix A

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 31 1
2. BE NUMBER: 616-0490 2
616-0150 3
3. IDENTIFICATION: Ha Dong Army Barracks and Supply Depot 4
4. DATE OF INFORMATION: 2 December 1966 5
DATE OF TISD: 2 November 1968 6
DATE OF PHOTOGRAPHY: 2 December 1966 7
DATE OF INTELLIGENCE REVIEW: 24 July 1968 8
5. LOCATION: 20-58-51N 105-47-42E, located 0.8 NM NE of Ha Dong, 9
1 NM SW of Ha Noi. 10
6. DESCRIPTION: This installation covers approximately 150 acres 11
and comprises nine areas located on both sides of the Ha Dong-Ha Noi 12
road. There are some 293 buildings in the complex which include 72 13
barracks (22 are dormitory-type), 12 administration buildings, 11 mess- 14
halls, 158 storage/support structures, and 37 miscellaneous support- 15
type buildings. The complex also contains 2 athletic fields, 3 16
auditorium/gymsiums, and a vehicle park. There are approximately 17
40,000 sq. ft. of storage space and troop capacity is estimated at 18
12,500. 19
7. SIGNIFICANCE: The 320th Division has been identified in 20
connection with the complex. 21
8. TARGET ENVIRONMENT: This target complex is located in the flat 22
and intensively cultivated area of the Red River Delta. Fields are 23
interspersed with small civilian settlements; at least seven are 24
scattered within one NM radius of the target. 25
9. DEFENSE ENVIRONMENT: 26
 - a. Target is within the SAM envelope. 27
 - b. AAA has been identified within 3 NM of the target. 28
 - c. HMG and small arms fire is anticipated. 29
10. DAMAGE OBJECTIVE: Destruction of storage buildings. Des- 30
truction of barracks buildings and accompanying personnel 31
casualties. Damage level is 30 percent. 32
11. EFFECT ON NVN: Damage to this complex would have no major 33
effect on the overall military position of the NVN. However, loss 34
of personnel and stores would probably result in diversion of troops 35
and supplies from other military areas until pre-strike levels could be 36
re-established. 37

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NO FOREIGN DISSEM EXCLUDED FROM AUTOMATIC DOWNGRADING

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(Revised by 15th Note to Holders)

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Index C to
Index D

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12. **RECUPERABILITY:** Barracks functions could be resumed within 12 hours after infliction of damage since adjacent areas contain sufficient unoccupied space and civilian settlements to accommodate displaced troops. Of greater military significance would be the time required to replace experienced specialists and technically-trained personnel. Depot operation could probably resume functioning within 12 to 24 hours, utilizing locally available labor (civilian and military) for clearing debris and effecting emergency repairs. Replacement of supplies would depend upon availability at other supply depots in the Ha Noi area and original source, whether North Vietnamese or Communist Chinese. If supplies are available elsewhere in Vietnam or southern Communist China, supplies could probably be replaced within 3 to 5 days.

13. **COLLATERAL DAMAGE:**

a. Light damage to surrounding area.

b. Population

Casualties*

Target Area Adjacent Area Target Area Adjacent Area

Mil Civ Mil Civ Mil Civ Mil Civ

10,000 0 4,000 500 600 0 40 5

*Casualties estimated under daylight alert conditions.

14. **RECOMMENDED WEAPONS AND SORTIES:**

This is a large target complex comprised of 9 areas. Weapons and sorties have been computed for each area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target are also shown:

(1) In order to achieve a damage level of 30%, weapons/sorties required over target:

WEAPON	250# SNAKEYE	500# SNAKEYE	500# BOMB	750# BOMB
Area A (300x200)	21/2	11/1	22/2	13/2
Area B (480x200)	15/1	10/1	21/2	13/2
Area C (460x230)	16/1	11/1	21/2	13/2
Area D (550x180)	15/1	11/1	22/2	14/2
Area E (640x290)	45/4	23/3	37/4	22/4
Area F (640x200)	18/2	13/1	25/3	16/3
Area G (640x510)	41/3	28/3	36/4	23/4
Area H (510x430)	53/4	28/3	38/4	23/4
Area J (1100x450)	103/9	53/6	71/8	42/7
Total	327/27	188/20	293/31	179/30

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(2) Weapons/sorties operationally required to achieve "over target" requirements shown above:

393/33 226/25 352/39 215/36

(3) In order to achieve a damage level of 70%, weapons/sorties required over target:

WEAPON	250# SNAKEYE	or	500# SNAKEYE	or	500# BOMB	or	750# BOMB
Area A	69/6		35/4		74/8		44/7
Area B	50/4		34/4		69/8		44/7
Area C	54/5		37/4		69/8		44/7
Area D	50/4		34/4		73/8		47/8
Area E	149/12		77/9		125/14		74/2
Area F	61/5		42/5		83/9		53/9
Area G	137/11		93/10		122/14		78/13
Area H	179/15		92/10		128/14		75/13
Area J	346/29		177/20		237/26		139/23
Total	1095/91		621/70		980/109		598/99

(4) Weapons/sorties operationally required to achieve "over target" requirements shown above:

1314/110 746/83 1176/131 718/120

15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%.

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3

#31

(Revised by 15th Note to Holders)

Aug-1-4

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Annex C to
Appendix 7

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 32 1
2. BE NUMBER: 617-0780 2
3. IDENTIFICATION: Vu Con Army Barracks and Supply Area 3
4. DATE OF INFORMATION: 26 January 1965 DATE OF TIS: 4
28 May 1965 5
5. LOCATION: 16-54-45N/106-49-50E, UTM XD 950706 6
(Approximately 3/4 NM W of Vu Con and 1 NM NE of Lang Moc. 7
One NM N of Demarcation Line.) 8
6. DESCRIPTION: Oriented generally on a north-south line 9
along the east bank of a N-S stream. Consists of two major 10
areas about a half mile apart. 11
 - a. The northern area contains a total of 24 buildings 12
and several miscellaneous shed-type structures. A central 13
group consists of 4 probable barracks, 6 small support- 14
type buildings and miscellaneous sheds. Just to the south 15
is a group of 7 buildings of which 2 are probable ware- 16
houses and 5 are support-type buildings. Adjacent to the 17
central group on the north are 4 probable warehouse/ 18
support-type buildings and 2 probable barracks. West of 19
the road is a small building that may be related to defense 20
positions on ridges to the west. 21
 - b. Approximately a half mile south are 2 additional 22
groups of buildings containing a total of 14 buildings 23
plus several sheds. To the east are 3 barracks, 3 ware- 24
houses, 6 support-type buildings and several smaller 25
buildings. 100 yards southwest of this group are 2 26
probable warehouse/support buildings. 27
 - c. Along the road about half-way between the northern 28
and southern areas are 2 buildings that appear to be a 29
barracks and a support building. 30
7. SIGNIFICANCE: This appears to be a newly constructed 31
area in good condition and extensively used. It is apparently 32
not only an occupied strong point on the demarcation line, but 33
also may be a staging area for infiltration units. 34
8. TARGET ENVIRONMENT: The installation is located in a 35
remote area just N of the demarcation line and approximately 36
centered between the coast and the Laotian border. The 37
village of Vu Con cannot be located in the photography near 38
the vicinity of map coordinates given, but the village of 39
Lang Moc is 1 NM SW. The terrain is mountainous and hilly, 40
heavily wooded with numerous streams. No civilian dwellings 41
are nearby. 42
9. DEFENSE ENVIRONMENT: 43
 - a. The installation falls within the defenses of the 44
DMZ complex, the principal unit being the 270th Infantry 45
Regiment, estimated strength 5000, with Hq at Vinh Linh, 46
approximately 14 NM to the NE. Elements from this regi- 47
ment may garrison this installation, supported by infil- 48
trators as required. The area is defended by 8 strong 49
points, 4 are south and southeast of the southern area, 50

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one is about 50 yards N from the eastern group and 3 are on ridges NW across the river from the central group of buildings in the northern area. All positions have A/W emplacements and small ammunition sheds are in five of them. No AAA positions are known to exist in the target area.

b. A RUS-2 and a SCR-270 are located near Vinh Linh at 1705N/10707E, and a KNIFEREST B is located near Vinh Linh at 1705N/10700E.

10. DAMAGE OBJECTIVE: Destruction of storage buildings. Destruction of barracks building and accompanying casualties to personnel. Destruction of defense positions. Damage level is 30 per cent.

11. EFFECT ON NVN: Immediate reduction in some North Vietnamese infiltration capabilities by inflicting casualties among trained guerrillas and disrupting advance support to VC elements.

12. RECUPERABILITY: If 30% damage to buildings is presumed, about a week or 10 days would be needed to effect emergency repairs and replacement of supplies because of the remote location of the area. Troops could bivouac under canvas until barracks repaired.

13. COLLATERAL DAMAGE: None.

14. RECOMMENDED WEAPONS AND SORTIES:

a. This is a large target complex comprised of seven areas. Weapons and sorties have been computed for each area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target is also shown.

(1) In order to achieve a damage level of 30%, weapons/sorties required over target:

Weapons:	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	750# BOMB
Area A	11/1		35/3		18/2		11/2
Area B	81/6		107/9		55/6		32/5
Area C	11/1		34/3		18/2		10/2
Area D	13/1		40/3		20/2		12/2
Area E	21/2		44/4		22/2		13/2
Area F	20/2		44/4		23/3		13/2
Area G	11/1		35/3		18/2		11/2
Totals:	168/14		339/29		174/19		102/17

(2) Weapons/sorties operationally required to achieve "over target" requirement shown above:

206/17	414/35	212/23	125/21
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(Revised by 7th Note to Holders)

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Annex C to
Appendix A

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(3) In order to achieve a damage level of 70%,
weapons/sorties required over target:

Weapon:	250# <u>SNAKEYE</u>	or	250# <u>BOMB</u>	or	500# <u>BOMB</u>	or	750# <u>BOMB</u>	
Area A	37/3		118/10		60/7		37/6	3
Area B	273/22		360/30		186/20		108/18	4
Area C	37/3		115/10		60/7		34/6	5
Area D	44/4		135/11		68/8		40/7	6
Area E	70/6		148/12		74/8		44/7	7
Area F	68/6		148/12		78/8		44/7	8
Area G	37/3		118/10		61/7		37/6	9
Totals:	566/47		1142/95		587/65		344/57	10

(4) Weapons/sorties operationally required to achieve
"over target" requirement shown above:

692/52 1390/116 716/79 420/70

15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%

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(Revised by 7th Note to Holders)

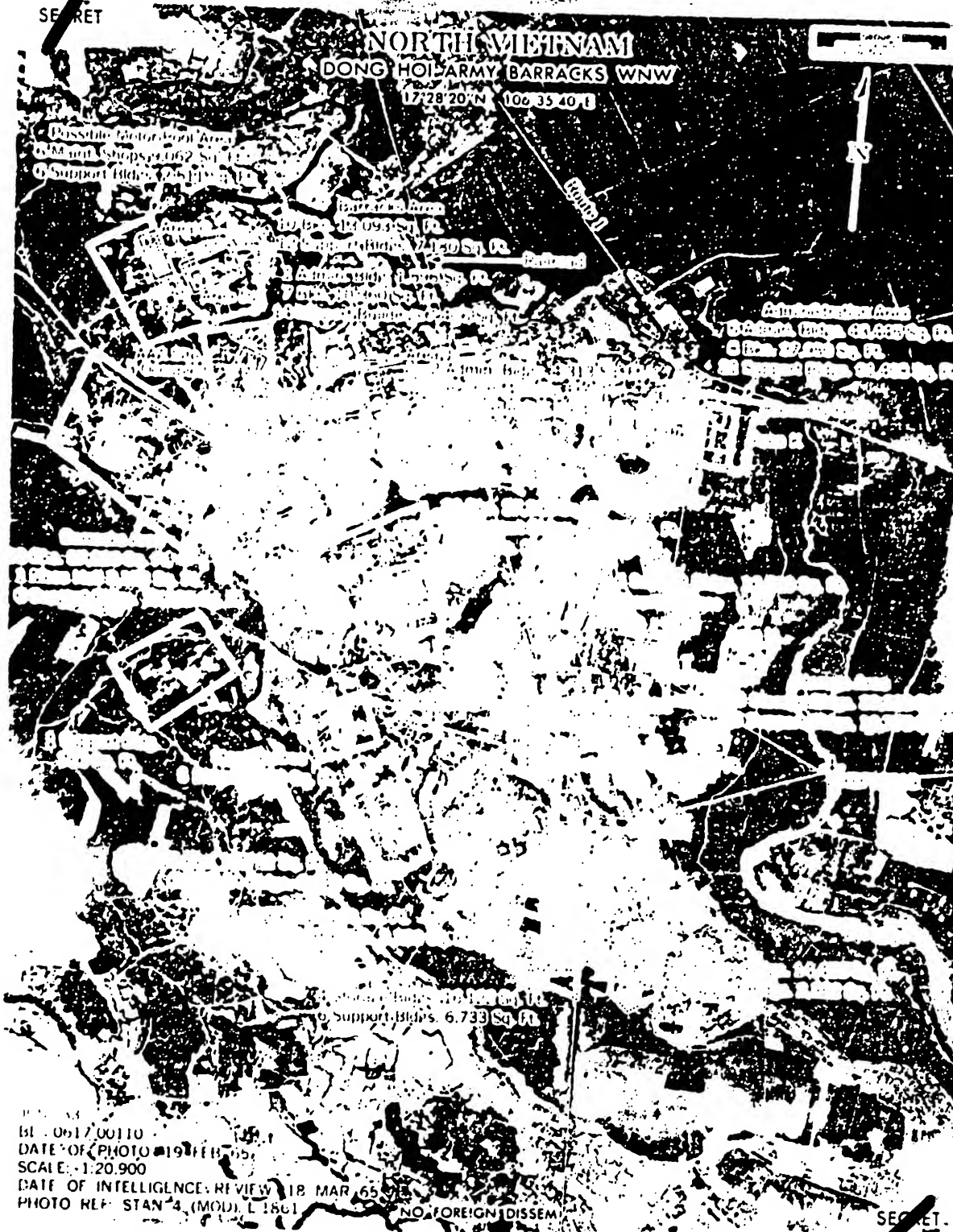
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TAB L TO ANNEX C TO APPENDIX A

TARGET NO. 33

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REF ID: A61700110
DATE OF PHOTO: 19 FEB 65
SCALE: 1:20,900
DATE OF INTELLIGENCE REVIEW: 18 MAR 65
PHOTO REF: STAN 4 (MOD) L 1861

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to Appendix A

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 33 1
2. BE NUMBER: 617-0110 2
3. IDENTIFICATION: Dong Hoi Army Barracks, WNW 3
4. DATE OF INFORMATION: 4 April 1965 DATE OF TIS: 1965 4
5
5. LOCATION: 17-28-20N/106-35-40E, UTM XE 700334 6
6. DESCRIPTION: The barracks area covers about 1100 7
acres just west of the abandoned NW railway line 1.4 NM W 8
of Dong Hoi. 0.5 NM east of the tracks at the curve of the 9
road from Dong Hoi to the A/P, Route 1, is an administration 10
headquarters area totaling 13 buildings, 5 of which are 11
large, multi-storied types. Adjacent are 15 barracks type 12
buildings and other small support-type buildings. South 13
are other administration/support buildings, 4 of which have 14
recently been dismantled. All are bounded by security fences, 15
and individual foxholes and slit trenches are adjacent to 16
the buildings. Buildings E of the railroad total about 53. 17
The barracks area west of the railroad totals approximately 18
93 buildings in one group of battalion size and other groups 19
that were probably supporting companies. There are 20
approximately 5 probable administration buildings, 49 bar- 21
racks type, and 30 various types of storage/support buildings. 22
There is a probable hospital near the center of the area. 23
7. SIGNIFICANCE: This area probably contains rear elements 24
of the 325th Infantry Division. It has a troop capacity of 25
approximately 2,500. The 325th is reported to have moved 26
into South Vietnam in support of V/C. Total division strength 27
is estimated at 12,500. 28
8. TARGET ENVIRONMENT: The barracks area is located in 29
a relatively flat, open, heavily cultivated area west of 30
Dong Hoi. Several civilian populated areas are located near 31
the barracks area. The general Dong Hoi area contains Dong 32
Hoi Airfield, the citadel in town, and several barracks 33
areas around Dong Hoi to house the elements of the 325th 34
Infantry Division. 35
9. DEFENSE ENVIRONMENT: 36
 - a. Dong Hoi Area AAA defenses include 7 active sites, 37
with 29 light (14.5mm-37mm) AAA positions occupied and 38
4 positions unoccupied, plus 10 inactive sites (47 39
positions unoccupied). (DOI: 14 February 1965) 40
 - b. The 501st Coastal Security Battalion has been report- 41
ed resident in the area, as are the Hq and some operational 42
elements of the 325th Infantry Division. 4W positions are 43
scattered throughout the various troop areas. 44
 - c. KNIFEWEST-B and SCR-270 early warning radars are 45
located at 17-30-00N/106-36-00E (XE 699354). 46
10. DAMAGE OBJECTIVE: Personnel casualties. Damage criterion 47
is structural damage to barracks and administration buildings 48
with accompanying casualties to personnel. Damage level is 30%. 49

~~TOP SECRET~~

A-C-L-2

Tab I to
Annex C to
Appendix A

(Revised by 7th Note to Holders)

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11. EFFECT ON DRV: Reduction of close military support capability and trained personnel to assist or participate in VC/PL actions. 1
2
3

12. RECUPERABILITY: With a destruction level of 30% it should take about 5 days for local military personnel to get back to normal operation. Repair to permanent structures would require about 3 weeks effort on an emergency basis. Replacement personnel could be in the Dong Hoi area within 72 hours. 4
5
6
7
8

13. COLLATERAL DAMAGE: Insignificant. 9

14. RECOMMENDED WEAPONS AND SORTIES: 10

a. This is a large target complex comprised of twenty-two areas. Weapons and sorties have been computed for each area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target is also shown. 11
12
13
14
15

(1) In order to achieve a damage level of 30%, weapons/sorties required over target: 16
17

Weapon:	250# <u>SNAKEYE</u>	or	250# <u>BOMB</u>	or	500# <u>BOMB</u>	or	750# <u>BOMB</u>	
Area A	55/5		75/6		39/4		23/4	18
Area B	40/3		64/5		33/4		20/3	19
Area C	49/4		81/7		42/5		25/4	20
Area D	73/6		108/9		54/6		32/5	21
Area E	59/5		89/7		46/5		27/5	22
Area F	33/3		61/5		32/3		19/3	23
Area G	26/2		49/4		25/3		15/3	24
Area H	28/2		49/4		25/3		15/3	25
Area I	72/6		101/9		52/6		31/5	26
Area J	84/7		110/9		56/6		33/6	27
Area K	132/11		183/15		129/14		74/12	28
Area L	51/4		70/6		36/4		21/3	29
Area M	29/3		54/5		28/3		16/3	30
Area N	77/6		110/9		56/6		33/5	31
Area O	34/3		61/5		32/4		19/3	32
Area P	29/2		49/4		25/3		15/2	33
Area Q	107/9		137/11		71/8		42/7	34
Area R	40/3		64/5		33/4		20/3	35
Area S	34/3		57/5		29/3		17/3	36
Area T	44/4		72/6		37/4		22/4	37
Area U	28/2		55/5		28/3		17/3	38
Area V	67/6		96/8		50/5		29/5	39
Totals	1249/104		1875/156		999/111		589/98	40

~~TOP SECRET~~

A-C-L-3

Tab L to
Annex C to
Appendix A

1947 RV.21

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(2) Weapons/sorties operationally required to achieve "over target" requirement shown above:

1525/127 2290/190 1230/136 718/117

(3) In order to achieve a damage level of 70%, weapons/sorties required over target:

Weapon	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	750# BOMB	
Area A	185/15		253/13		131/15		78/13	6
Area B	135/11		216/18		111/2		67/11	7
Area C	165/14		273/23		142/16		85/14	8
Area D	246/21		364/30		182/20		108/18	9
Area E	199/17		300/25		155/17		91/15	10
Area F	111/9		205/17		108/12		64/11	11
Area G	88/7		165/14		85/9		51/9	12
Area H	95/8		165/14		85/9		51/9	13
Area I	243/20		340/26		175/19		105/17	14
Area J	283/24		370/31		189/21		111/19	15
Area K	445/37		618/52		435/48		249/41	16
Area L	172/14		232/19		121/13		71/12	17
Area M	98/8		182/15		95/10		54/9	18
Area N	259/22		371/31		189/21		111/18	19
Area O	115/10		205/17		108/12		64/11	20
Area P	98/8		165/14		85/9		51/9	21
Area Q	361/30		462/39		239/27		142/24	22
Area R	135/11		216/18		111/12		68/11	23
Area S	115/10		192/16		98/11		58/10	24
Area T	148/12		242/20		125/14		75/12	25
Area U	95/8		185/15		195/22		58/10	26
Area V	226/19		323/27		169/19		98/16	27
TOTALS	4213/351		6313/526		3471/384		1991/332	28

(4) Weapons/sorties operationally required to achieve "over target" requirement shown above:

5130/427 7720/642 4230/468 2430/405

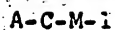
15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%

~~TOP SECRET~~

A-C-L-4
(Revised by 7th Note to Holders)

Tab L to
Annex C to

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~~SECRET~~

TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 34 1
2. B.E. NUMBER: 616-0282 2
3. IDENTIFICATION: Vinh Yen Army Barracks and Training Area N 3
4. DATE OF INFORMATION: 19 July 1966 4
DATE OF TISD: 8 November 1968 5
DATE OF PHOTOGRAPHY: 19 July 1966 6
DATE OF INTELLIGENCE REVIEW: 19 September 1968 7
5. LOCATION: 21-19-27E 105-36-19E, 1 NM NE of Vinh Yen. 8
6. DESCRIPTION: This military complex covers approximately 400 acres and is comprised of 28 barracks, 55 support buildings, 7 mess halls, 2 administrative buildings, and 16 storage structures. Part of the storage buildings are possibly vehicle support-type facilities. A possible buried POL storage area is adjacent to the NW barracks area and 3 probable ammunition storage buildings are located just N of the main storage area. AAA defense sites are evident and the training areas are well crossed with tracks, indicating both tank and wheeled vehicle training. A hospital is located nearby to the SW of the target. Troop capacity is approximately 3,000. 9
10
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16
17
7. SIGNIFICANCE: The 202nd Tank Regiment, the only tank regiment in the PAVN OB is carried as being located in this area. Both tanks and ZSU-57-2's (self-propelled AAA) have been reported in this vicinity and a regiment of the 312th Inf Div is also located here. 18
19
20
21
8. TARGET ENVIRONMENT: This training area and barracks location is near the head of the Tonkin Delta NW of Ha Noi. It is drained by several streams which flood the paddy fields during the planting season. It is served by the rail line running NW from Ha Noi and by several supporting military roads. Vinh Yen and other small farming villages are scattered throughout the area. 22
23
24
25
26
9. DEFENSE ENVIRONMENT: 27
 - a. The target is within the SAM envelope. 28
 - b. AAA has been identified within 3 NM of the target. 29
 - c. HMG and small arms fire is anticipated. 30
10. DAMAGE OBJECTIVE: Personnel casualties. Damage criterion is structural damage to warehouses, support buildings and barracks/administration buildings. Building contents will be destroyed and personnel losses sustained. Damage level is 30 percent. 31
32
33
34
11. EFFECT ON NVN: Will reduce NVN capability to support VC/PL with tank units and may result in destruction of critical tanks and/or component parts. 35
36
12. RECUPERABILITY: Target contains numerous warehouse/storage type buildings in addition to barracks. Assuming 30 percent destruction, it is probable that training would be disrupted for from 48 to 72 hours. There is ample room to bivouac in adjacent areas. Essential supply items would probably be destroyed and replacement would be necessary from Yen Bai or Ha Noi. 37
38
39
40
41

~~SECRET~~ NO FOREIGN DISSEM EXCLUDED FROM AUTOMATIC DOWNGRADING

A-C-M-2

(Revised by 15th Note to Holders)

TABM to
Annex C to
Form 100-1

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~~SECRET~~

13. COLLATERAL DAMAGE:

a. Insignificant

b. Population

Casualties*

Target Area		Adjacent Area		Target Area		Adjacent Area	
Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ
2000	0	1000	200	120	0	10	2

*Casualties estimated under daylight alert conditions.

14. RECOMMENDED WEAPONS AND SORTIES:

This target complex is comprised of seven areas. Four areas (including four sub-areas) have been delineated for weapons application. Weapons and sorties have been computed for each area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target are also shown:

(1) In order to achieve a damage level of 30%, weapons/sorties required over target:

WEAPON	250# SNAKEYE	or	500# SNAKEYE	or	500# BOMB	or	750# BOMB
Area A1 (400' x 200')	24/2		13/1		25/3		15/3
Area A2 (140' x 90')	10/1		6/1		18/2		10/2
Area D1 (400' x 90')	15/1		8/1		23/3		14/2
Area D2 (110' x 90')	10/1		5/1		17/2		10/2
Area E (300' x 100')	13/1		7/1		21/2		12/2
Area F (150' x 120')	12/1		6/1		18/2		11/2
Totals:	84/7		45/6		122/14		72/13

(2) Weapons/sorties operationally required to achieve "over target" requirements shown above:

101/8 54/6 147/16 87/15

(3) In order to achieve a damage level of 70%, weapons/sorties required over target:

~~SECRET~~

2

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A-C-M-3

(Revised by 15th Note to Holders)

TAB M to
Annex C to
Appendix A

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~~SECRET~~

Weapon	250# <u>SNAKEYE</u>	or	500# <u>SNAKEYE</u>	or	500# <u>BOMB</u>	or	750# <u>BOMB</u>	
Area A1	80/7		41/5		84/9		50/8	3
Area A2	34/3		18/2		58/6		34/6	4
Area D1	48/4		25/3		78/9		46/8	5
Area D2	33/3		17/2		57/6		34/6	6
Area E	44/4		23/3		69/8		40/7	7
Area F	40/3		21/2		59/7		35/6	8
Totals:	279/24		145/17		405/45		239/41	9

(4) Weapons/sorties operationally required to achieve "over target" requirements shown above: 10
11

335/28 174/19 486/54 287/48 12

15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50% 13

~~SECRET~~

3

#34

A-C-M-4

(Revised by 15th Note to Holders)

TAB M to
Annex C to
Appendix 7

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TAB H TO ANNEX C TO APPENDIX A

TARGET H



SECRET

A-C-N-1

Tab H to Annex C to Appendix A

~~SECRET~~

TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 30. 1
2. BE NUMBER: 616-0205 2
3. IDENTIFICATION: Song Tay Military School and Training Facility 3
4
4. DATE OF INFORMATION: 5 January 1968 5
DATE OF TISD: 12 November 1968 6
DATE OF PHOTOGRAPHY: 12 March 1967 7
DATE OF INTELLIGENCE REVIEW: 20 September 1968 8
5. LOCATION: 21-06-35N 105-29-12E, located 1.5 NM SW of Son Tay, 1.5 NM NE of Tong A/F, and approximately 20 NM WNW of Ha Noi. 9
10
6. DESCRIPTION: This installation is a part of the large Son Tay military complex. The 8 major areas comprising this target are interconnected by roads and are surrounded by fields and civilian settlements. The installation contains 85 buildings including 10 barracks, 10 storage buildings (3 revetted), 13 classrooms, 3 administration buildings, 21 support buildings, 3 messhalls, and 17 classroom/support buildings (Area F has 12 barracks removed). A large 6-wing hospital is located just E of the installation and 3 revetted probable ammunition storage buildings are in a fence-secured area adjoining the main storage facilities. A training area is located at the NE end of the facility and AAA revetments, AW sites and trenching are scattered throughout the installation. 11
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21
22
7. SIGNIFICANCE: This site reportedly houses 2 artillery regiments and several schools, including armor and signal officer training. 23
24
25
8. TARGET ENVIRONMENT: This installation is located in a relatively flat and heavily cultivated area. Tong airfield is 1.5 NM SW of the barracks area and an Army school for field artillery training is adjacent to the barracks area. 26
27
28
29
9. DEFENSE ENVIRONMENT: 30
 - a. The target is within the SAM envelope. 31
 - b. AAA has been identified within 3 NM of the target. 32
 - c. HMG and small arms fire is anticipated. 33
10. DAMAGE OBJECTIVE: Personnel casualties. Damage criterion is structural damage to barracks buildings with accompanying casualties to personnel. Damage level is 30 percent. 34
35
36
11. EFFECT ON NVN: Damage to this installation would temporarily disrupt the training of officers of various branches of the service and artillery training, and would probably necessitate some shifting of personnel within the defensive perimeter of Ha Noi. The overall NVN defensive position, however, would not be seriously affected. 37
38
39
40
41
42
12. RECUPERABILITY: If 30 percent destruction were incurred here, normal operations could be resumed within 5 days, assuming tents and make-shift shelters are used. Replacement of both personnel and supplies would require no more than a week since this encampment is relatively close to Ha Noi and other military installations and transportation routes are good. 43
44
45
46
47
48

~~SECRET~~ NO FOREIGN DISSEM EXCLUDED FROM AUTOMATIC DOWNGRADING

A-C-N-2

(Revised by 15th Note to Holders)

TAB N to
Annex C to
Appendix A

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~~SECRET~~

13. COLLATERAL DAMAGE:

a. Insignificant

b. Population

Casualties*

Target Area Adjacent Area Target Area Adjacent Area

Mil Civ Mil Civ Mil Civ Mil Civ

300 0 75 150 18 0 1 2

*Casualties estimated under daylight alert conditions.

14. RECOMMENDED WEAPONS AND SORTIES:

This installation is comprised of 8 areas. Four areas have been delineated for weapons application. Weapons and sorties have been computed for each area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target are also shown:

(1) In order to achieve a damage level of 30 percent, weapons/sorties required over target:

WEAPON	250# SNAKEYE	or	500# SNAKEYE	or	500# BOMB	or	750# BOMB
Area B (400x114)	17/1		9/1		24/3		14/2
Area C (640x290)	45/4		23/3		37/4		22/4
Area D (660x450)	37/3		26/3		35/4		22/4
Area G (820x290)	54/5		28/3		45/4		27/5
Totals	153/12		86/10		141/16		85/15

(2) Weapons/sorties operationally required to achieve "over target" requirements shown above:

184/15	104/12	170/19	102/17
--------	--------	--------	--------

(3) In order to achieve a damage level of 70 percent, weapons/sorties required over target:

WEAPON	250# SNAKEYE	or	500# SNAKEYE	or	500# BOMB	or	750# BOMB
Area B	55/5		28/3		79/9		46/8
Area C	149/12		77/9		125/14		74/12
Area D	125/10		85/9		115/13		74/12
Area G	182/15		93/10		152/17		89/15
Totals	511/42		283/31		471/53		283/47

(4) Weapons/sorties operationally required to achieve "over target" requirements shown above:

614/51	340/38	566/63	340/57
--------	--------	--------	--------

15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%.

~~SECRET~~

2

#35

A-C-N-3

(Revised by 15th Note to Holders)

TAB N to
Index C to

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TAB P TO ANNEX C TO APPENDIX A

TARGET NO. 37



~~TOP SECRET~~
(R. Sec'd by 6th N/H)

A-C-P-1

Tab P to Annex C to Appendix A
1-20-64

~~TOP SECRET~~

TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 37 1
2. BE NUMBER: 616-0119 2
3. IDENTIFICATION: Moc Chau Army Barracks 3
4. DATE OF INFORMATION: 30 January 1965 DATE OF TIS: 16 April 1965 4
5
5. LOCATION: 20-49-50N 104-38-10E, UTM 48Q VJ 617032 6
approximately 10 NM NE of the Laos/North Vietnam border. 7
0.8 NM S of Route 6. 8
6. DESCRIPTION: Area contains 3 targeted sub areas and 9
other groupings of a few buildings each, all interconnected 10
by a secondary road net. W of the road from Route 6 to Ban 11
Ang are two targeted areas. The southernmost comprises 3 12
administration-type buildings 5 barracks-type buildings, 11 13
storage buildings and several small support buildings. Out- 14
side the area to the south is a possible motor pool. Another 15
targeted area is immediately N and includes 4 barracks-type 16
buildings, 2 support buildings and a few small u/i buildings. 17
Further to the N and NE are other scattered buildings of various 18
types. About 500 yds directly E is the third targeted area 19
which includes two barracks-type buildings and 12 maintenance/ 20
support-type buildings and other smaller buildings. Through- 21
out the general area a few buildings are new, but there is 22
evidence that several former buildings have been dismantled. 23
There are some trenches and strong points or AW positions 24
along the trails to the north and a few revetments can be 25
seen. 26
7. SIGNIFICANCE: This area is part of the Moc Chau-Ban Xom 27
Lom complex utilized by the 335th Infantry Brigade and is 28
reportedly used as an infantry training area. Its proximity 29
to the Laos border makes it significant as a training area for 30
cadre and small units going into Laos. 31
8. TARGET ENVIRONMENT: Target area is located in the hill 32
country south of the Black River. Terrain is wooded on ridges 33
and hillsides, with cultivated areas along larger watercourses. 34
Civilian settlements are located approximately 1/2 mile northeast 35
and southwest of the target area. Headquarters and major 36
elements of the 335th Brigade are located in the Moc Chau-Ban 37
Xom Lom area (1 Jan 1964). 38
9. DEFENSE ENVIRONMENT: 39
 - a. There are no AAA sites in the immediate area. At 40
Ban Xom Lom, approximately 6 NM to the east, is a 4-position 41
medium (57mm-85mm) site, 4 positions occupied and a probable 42
light (14.5mm-37mm) site, 4 positions occupied. There is 43
also a 4-position unoccupied light site. 44
 - b. The target is well within range of the GCI systems 45
at Ban Xom Lom and at Hanoi. 46
 - c. Cadre and trainees in the immediate area probably 47
comprise 1000 personnel and there are numerous AW positions. 48

~~TOP SECRET~~

A-C-P-2

Tab P to
Annex C to
Appendix A

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10. DAMAGE OBJECTIVE: Destruction of barracks, administration and storage buildings. Damage criteria is structural damage to support buildings and barracks and accompanying casualties to personnel. Damage level is 30 percent. 1
2
3
4

11. EFFECT ON DRV: Immediate reduction in DRV capability to send trained units into Laos and disruption of advanced support to P/L elements. 5
6
7

12. RECUPERABILITY: Functioning of this barracks area could be resumed within 12 hours after infliction of damage. Adjacent areas provide sufficient terrain to accommodate all troops under canvas. 8
9
10
11

13. COLLATERAL DAMAGE: Insignificant 12

14. RECOMMENDED WEAPONS AND SORTIES: 13

a. This is a large target complex comprised of three areas. Weapons and sorties have been computed for each area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target is also shown 14
15
16
17
18

(1) In order to achieve a damage level of 30% weapons/sorties required over target: 19
20

Weapon:	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	750# BOMB	
Area A	47/4		75/7		39/5		23/4	21
Area B	18/2		43/4		22/3		13/3	22
Area C	40/4		64/6		33/4		20/4	23
TOTALS:	105/9		182/16		94/11		56/10	24

(2) Weapons/sorties operationally required to achieve "over target" requirement shown above: 25
26

128/11 222/19 115/13 68/12 27

(3) In order to achieve a damage level of 70% weapons/sorties required over target: 28
29

Weapon:	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	750# BOMB	
Area A	158/14		253/22		132/15		78/13	30
Area B	61/6		145/13		75/9		44/8	31
Area C	135/12		216/18		112/13		68/12	32
TOTALS:	354/30		614/52		319/36		190/32	33

(4) Weapons/sorties operationally required to achieve "over target" requirement shown above: 34
35

432/37 749/63 389/44 232/39 36

15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%. 37

~~TOP SECRET~~

A-C-P-3

Tab P to
Annex C to
Appendix A

~~TOP SECRET~~

TAB R TO ANNEX C TO APPENDIX A

TARGET NO. 39



~~TOP SECRET~~

A-C-R-1

Tab R to Annex C
to Appendix A

~~TOP SECRET~~

TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 39 1
2. BE NUMBER: 0617-0082 2
3. IDENTIFICATION: Chap Le Army Barracks NW 3
4. DATE OF INFORMATION: 19 February 1965 DATE OF TIS: 23 March 1965 4
5
5. LOCATION: 17-07-50N, 106-56-50E (UTM 48Q YD 083943) 6
1.7 NM NW of Chap Le. 7
6. DESCRIPTION: The Chap Le Army Barracks are part of an active military complex extending N along Route 1 from Vinh 8
Linh. Two groups of barracks are in a NW/SE alignment on the 9
W side of Route 1. The larger and southernmost area consists 10
of approximately 14 barracks-type buildings, 2 administration 11
buildings, 8 storage-type buildings and 16 probable support 12
buildings. The northern group contains 5 barracks-type 13
buildings, 1 administration building and 6 storage/support 14
buildings. Troop capacity is 1000 - 1200. NW another group 15
of buildings has been dismantled except for a mess hall and 16
two support buildings. Several vehicle revetments are along 17
the road S of the larger area and there are trenches, foxholes, 18
strongpoints and light AAA positions throughout the area. 19
The area can contain at least 2 battalions and headquarters 20
elements. 21
22
7. SIGNIFICANCE: This installation appears to be a head- 23
quarters in an extensive military complex near the Line of 24
Demarcation and can both control Route 1 and assist 25
infiltration activities to the S and W. Probably a part 26
of the 270th Regt., currently carried heavily overstrength 27
at an estimated total of 5,000. 28
8. TARGET ENVIRONMENT: The Chap Le Army Barracks are 29
adjacent to Route 1, 3 NM SW of the Gulf of Tonkin in flat 30
lowland terrain. The area is 27 NM SE of Dong Hoi and 31
approximately 7 NM from the Line of Demarcation. It is in 32
an area of numerous small farming villages the nearest of 33
which is Chap Le, 1.7 NM to the SE. 34
9. DEFENSE ENVIRONMENT:
 - a. There are 5 active light (14.5mm - 37mm) AAA sites 35
containing 16 occupied positions in the Chap Le-Vinh Linh 36
area. Additionally, there are 23 inactive sites with 37
102 unoccupied positions (DOI: 8-19 Feb 65). Photography 38
of 11 March 65 shows 1 active site (4 positions occupied, 39
2 unoccupied) and 3 inactive sites (14 positions unoccupied) 40
in the immediate vicinity of the target. 41
 - b. Estimated military population in Chap Le-Vinh Linh 42
area is about 5,000. Target area will house about 1,500 43
personnel and is well secured by strong points and trenches 44
in the area. In addition to AAA sites noted there are many 45
A/W positions in the area. 46
 - c. Three early warning radars are located within a 10 NM 47
radius of Vinh Linh. A KNIFEREST-B, a RUS-2 and an SCR-270. 48

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Appendix A

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10. DAMAGE OBJECTIVE: Personnel casualties. Damage criterion is structural damage to barracks and administration buildings with accompanying casualties to personnel. Damage level is 30%. 1
2
3
4
11. EFFECT ON DRV: Thirty percent damage level would reduce the support for the DRV forces immediately north of the DMZ at the 17th parallel and would probably reduce the support for the Viet Cong forces in the NW part of South Vietnam. 5
6
7
8
12. RECOVERABILITY: Barracks area could probably be operational within 6 to 12 hours. Ample space exists for displaced troops to bivouac. 9
10
11
13. COLLATERAL DAMAGE: Insignificant. 12
14. RECOMMENDED WEAPONS AND SORTIES: 13
- a. This is a large target complex comprised of four areas. Weapons and sorties have been computed for each area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target is also shown. 14
15
16
17
18
- (1) In order to achieve a damage level of 30% weapons/sorties required over target: 19
20

Weapon:	250# <u>SNAKEYE</u>	or	250# <u>BOMB</u>	or	500# <u>BOMB</u>	or	750# <u>BOMB</u>	
Area A	48/4		72/6		37/4		22/4	21
Area B	109/9		145/12		74/8		44/7	22
Area C	71/6		93/8		48/5		28/5	23
Area D	62/5		86/7		44/5		26/4	24
TOTALS:	290/24		396/33		203/22		120/20	25

(2) Weapons/sorties operationally required to achieve "over target" requirement shown above: 26
27

354/31	484/40	248/27	146/24	28
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(3) In order to achieve a damage level of 70% weapons/sorties required over target: 29
30

Weapon:	250# <u>SNAKEYE</u>	or	250# <u>BOMB</u>	or	500# <u>BOMB</u>	or	750# <u>BOMB</u>	
Area A	162/14		243/20		125/14		75/12	31
Area B	368/31		489/41		250/28		149/25	32
Area C	240/20		314/26		162/18		95/16	33
Area D	209/17		290/24		149/16		88/15	34
TOTALS:	979/82		1336/111		686/76		407/68	35

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(4) Weapons/sorties operationally required to achieve "over target" requirement shown above: 1
2

1190/100 1630/136 836/93 496/83 3

15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50% 4

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TAB S TO ANNEX C TO APPENDIX A

TARGET NO. 39.1



NORTH VIETNAM
BEN QUANG ARMY BARRACKS, SW
17 01 30N 105 45 00E

NO FOREIGN DISSEM

ICSS 100
FOR DISSEM
ONLY OF PHOTO ISSUED BY
STATE DEPT
DATE OF INTELLIGENCE REVIEW 10 MAR 65
PHOTO FOR ANALYSIS & JUDGE 10 MAR 65

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Tab S to Annex C
to Appendix A

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 39.1 1
2. BE NUMBER: 617-0223 2
3. IDENTIFICATION: Ben Quang Army Barracks SW 3
4. DATE OF INFORMATION: 23 February 1965 4
DATE OF TIS: 5 April 1965 5
5. LOCATION: 17-01-00N/106-55-10E, UTM 48Q XD 025822, 6
approximately 6.5 NM WSW of Vinh Linh and 2.5 NM N of DMZ. 7
6. DESCRIPTION: The target contains 3 barracks area, tar- 8
getted A, B, and C on the N side of Ben Xe River and an 9
adjacent training area across the river. Area A contains 1 10
administration building, 8 barracks-type, 9 barracks, 10 sup- 11
port buildings, and several other small buildings, housing 12
approximately 470 troops. Area B contains 11 barracks-type, 13
7 support buildings, 2 administration-type buildings and other 14
small buildings, housing approximately 730 troops. Area C 15
contains 16 barracks/support buildings, plus smaller buildings 16
housing approximately 870 troops. South across the river from 17
area C is a training area and some small support buildings. 18
7. SIGNIFICANCE: Installations in the target area could 19
provide housing for up to 3 battalions of troops. They appear 20
part of a military complex that extends NNE through the town 21
of Ben Quang. Target could be involved in defense of DMZ 22
and/or final staging and training of troops passing into South 23
Vietnam. Possibly units of the overstrength (5,000) 270th 24
Independent Infantry Regiment are located here. 25
8. TARGET ENVIRONMENT: Target is approximately 0.7 NM SW 26
of the village of Ben Quang, situated in the intensively cul- 27
tivated lowlands of the Ben Xe River, 10 NM from the Gulf of 28
Tonkin. Areas not under cultivation are covered with scrub 29
and under-brush. Population of Ben Quang is approximately 500. 30
9. DEFENSE ENVIRONMENT: No AAA defenses have been identi- 31
fied in the target vicinity and no revetted gun positions have 32
been observed. In the Vinh Linh area only 5 NM ENE are 5 33
active light (14.5mm-37mm) sites amounting to 16 guns. Also 34
there are 23 inactive sites with 102 unoccupied positions as 35
well as numerous prepared AW positions. 36
- Within a 10 NM radius from Vinh Linh are the following 37
EW radar: 38
- a. KNIFEREST B 39
- b. RUS-2 40
- c. SCR-270 41
10. DAMAGE OBJECTIVE: Personnel casualties. Damage cri- 42
terion is structural damage to barracks and administration 43
buildings with accompanying personnel casualties. Damage 44
level is 30 percent. 45

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11. EFFECT ON NVN: Thirty percent damage level would reduce the support for the DRV forces immediately north of the DMZ at the 17th parallel and would probably reduce the support for the Viet Cong forces in the NW part of South Vietnam.

12. RECUPERABILITY: Barracks area would probably be operational within 6 to 12 hours. Ample space exists for displaced troops to bivouac.

13. COLLATERAL DAMAGE: Insignificant.

14. RECOMMENDED WEAPONS AND SORTIES:

a. This is a large target complex comprised of three areas. Weapons and sorties have been computed for each area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target is also shown.

(1) In order to achieve a damage level of 30% weapons/sorties required over target:

Weapon:	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	750# BOMB
Area A	80/7		100/8		50/6		28/5
Area B	45/4		66/6		34/4		20/3
Area C	38/3		62/5		31/3		19/3
TOTALS:	163/14		228/19		115/13		67/13

(2) Weapons/sorties operationally required to achieve "over target" requirement shown above:

195/17	288/23	140/16	81/16
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(3) In order to achieve a damage level of 70% weapons/sorties required over target:

Weapon:	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	750# BOMB
Area A	250/21		338/28		180/20		100/17
Area B	150/13		240/20		120/13		68/11
Area C	125/10		220/18		110/12		62/10
TOTALS:	525/44		798/66		410/45		230/38

(4) Weapons/sorties operationally required to achieve "over target" requirement shown above:

640/54	905/82	500/55	280/46
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15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%.

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TAB T TO ANNEX C TO APPENDIX A

TARGET NO. 39.11



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TARGET INFORMATION AND STRIKE DATA

1. TARGET NO: 39.11 1
2. BE NUMBER: 0617-00084 2
3. IDENTIFICATION: Hoan Lao Army Barracks S 3
4. DATE OF INFORMATION: 5 January 1965 DATE OF TIS: 4
10 November 1965 5
5. LOCATION: 17-00-09N. 106-31-20E UTM XE 68430, 1.2 NM 6
SW of Hoan Lao and 8.3 NM NW of Dong Hoi. 7
6. DESCRIPTION: Target is a military barracks area consist- 8
ing of 2 separate sections covering approximately 106 acres. 9
The main area is 1 NM SW of route 1 and just to the west of 10
the abandoned railroad, on a natural surface road. Adjacent 11
to the barracks compounds are active training areas showing 12
numerous foxholes, trenches, revetments, strongpoints, and 13
A/W positions. The barracks areas contain a total of 14
approximately 70 major buildings consisting of about 20 15
barracks-type buildings, 30 support/storage buildings, 11 16
administration type buildings, 3 probable mess halls and 3 17
revetted buildings probably used for ammo storage. In addition 18
there are support type buildings scattered throughout the 19
training area. 20
7. SIGNIFICANCE: A regiment of the 325th Infantry Division 21
has been reported in this area and target appears to be a 22
regimental complex. It is capable of supporting up to 2500 23
troops. 24
8. TARGET ENVIRONMENT: The barracks area is located in 25
relatively flat coastal lowland about 8.3 NM NW of Dong Hoi. 26
Several civilian populated areas are nearby and most of the area 27
is under heavy rice cultivation. About 5 NM SE is Dong Hoi 28
A/P. 29
9. DEFENSE ENVIRONMENT:
 - a. Several A/W positions can be seen in the area and a 30
regimental heavy weapons battalion is probably present. 31
Normal regimental defense capabilities can be anticipated. 32
Within 5 NM to the S and SE other regimental size areas 33
are located. 34
 - b. Dong Hoi area AAA defenses include 7 active sites with 35
29 light (14.5 - 37mm) positions occupied and 4 unoccupied. 36
The nearest is 5.2 NM SE near Dong Hoi A/P. There are 10 37
inactive sites (47 positions unoccupied). DOI: 14-Feb 1965. 38
 - c. KNIFEREST-B and SCR-270 EW radars are located at 39
17-30-00N, 106-36-00E (XE 699354). 40
10. DAMAGE OBJECTIVE: Personnel casualties. Damage 41
criterion is structural damage to barracks and administration 42
buildings with accompanying casualties to personnel. Damage 43
level is 30%. 44
11. EFFECT ON NVN: Reduction of close military support 45
capability and trained personnel to assist or participate in 46
VC/PL actions. 47

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12. RECUPERABILITY: With a destruction level of 30% it should take about 5 days for local military personnel to get back to normal operations bivouaced under tents. Repair to permanent structures might take about 2-3 weeks.

13. COLLATERAL DAMAGE: Insignificant.

14. RECOMMENDED WEAPONS AND SORTIES:

a. This is a large target complex comprised of four areas. Weapons and sorties have been computed for each area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target is also shown.

(1) In order to achieve a damage level of 30% weapons/sorties required over target:

Weapons:	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	750# BOMB
Area A	418/35		483/40		248/28		145/24
Area B	37/3		60/5		31/3		18/3
Area C	91/8		113/9		58/6		34/6
Area D	27/2		49/4		25/3		15/2
TOTALS	573/48		705/58		362/40		212/35

(2) Weapons/sorties operationally required to achieve "over target" requirement shown above:

698/58	860/71	410/49	258/43
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(3) In order to achieve a damage level of 70% weapons/sorties required over target:

Weapon:	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	750# BOMB
Area A	1409/117		1628/135		836/93		489/82
Area B	125/10		203/17		105/12		61/10
Area C	306/26		381/32		195/22		115/19
Area D	91/8		165/14		85/9		51/8
TOTALS:	1931/161		2377/198		1221/136		716/119

(4) Weapons/sorties operationally required to achieve "over target" requirement shown above:

2360/197	2880/241	1490/165	872/185
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15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%.

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Appendix A
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TAB U TO ANNEX C TO APPENDIX A

TARGET NO. 10.12



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A-C-U-1

TAB U TO ANNEX C
TO APPENDIX A

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 39.12 1
2. BE NUMBER: 617-00203 2
3. IDENTIFICATION: Dong Hoi Army Barracks, Citadel 3
4. DATE OF INFORMATION: 12 February 1965 4
DATE OF TIS: 16 April 1965 5
5. LOCATION: 17-27-59N/106-37-34E, UTM 48Q XE 726317. 6
16 NM SE of Quang Khe, 33 NM NW of Vinh Linh 7
6. DESCRIPTION: Installation is located in the center of 8
Dong Hoi and is secured by wall and moat. Two deck-type 9
bridges permit Route 1 to enter and exit the installation in 10
a north - south direction. The area contains 42 barracks 11
(98,000 sq. ft.) 3 administration buildings, 36 storage/support 12
type buildings and miscellaneous small buildings. A per- 13
sonnel communication trench system surrounds the athletic 14
field located in southwest portion of the installation. 15
7. SIGNIFICANCE: This installation is one of the several 16
within the Dong Hoi military complex and probably houses 17
troops used for the internal security of Dong Hoi. It also 18
could provide logistic support for nearby operational elements 19
of the 325th Division. The 325th reportedly directs troop 20
operations in the DMZ and possibly provides support to both 21
Viet Cong and Pathet Lao activities. 22
8. TARGET ENVIRONMENT: Urban Dong Hoi surrounds the citadel 23
and civilian housing is particularly dense on the north and the 24
southeast. The Kien Giang skirts the northeastern section of 25
the wall and moat. 26
9. DEFENSE ENVIRONMENT: Dong Hoi area defenses include 27
7 light (14.5mm-37mm) AAA sites, with 29 light (14.5mm-37mm) 28
positions occupied and 4 positions unoccupied, plus 10 29
inactive sites (48 positions unoccupied). DOI: 31 March 1965. 30
- The 501st Coastal Security Battalion is reported located 31
at Dong Hoi, in addition to elements of the 325th Division in 32
and around Dong Hoi. 33
- KNIFEREST B and SCR-270 radars are located at 1730N 34
10636E. Early warning detection capabilities are: 35
- a. 60 NM for A-1 and F-101 aircraft at 3,000 ft. 36
- b. 80 NM for A-1 and F-101 aircraft at 5,000 ft. 37
- c. 120 NM for F-101 aircraft at 15,000 ft and above. 38

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10. DAMAGE OBJECTIVE: Personnel casualties. Damage criterion is structural damage to barracks and administration buildings with accompanying casualties to personnel. Damage level is 30 percent.

11. EFFECT ON DRV: This installation reportedly houses security troops, in which case destruction would have minimal effect on the 325th Division or upon support to the DMZ and VC; however, defensive operations in the general Dong Hoi complex would be disrupted temporarily.

12. RECUPERABILITY: Basic functions of this barracks area could be resumed within 12-24 hours after infliction of damage. The athletic field and unoccupied terrain beyond the moat could accommodate displaced troops under canvas. Personnel replacements could probably be obtained from the local militia within 48 hours.

13. COLLATERAL DAMAGE: Insignificant.

14. RECOMMENDED WEAPONS AND SORTIES:

a. This is a large target complex comprised of three areas. Weapons and sorties have been computed for each area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target is also shown.

(1) In order to achieve a damage level of 30% weapons/sorties required over target:

Weapon:	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	750# BOMB
Area A	153/13		196/17		100/12		59/10
Area B	73/7		108/9		56/7		33/6
Area C	17/2		49/5		25/3		15/3
TOTALS:	243/21		353/30		181/21		107/18

(2) Weapons/sorties operationally required to achieve "over target" requirement shown above:

296/26	430/37	221/26	130/22
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(3) In order to achieve a damage level of 70% weapons/sorties required over target:

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Weapon:	250#	250#	500#	750#	
	<u>SNAKEYE</u>	or <u>BOMB</u>	or <u>BOMB</u>	or <u>BOMB</u>	
Area A	516/43	660/55	338/38	199/34	1
Area B	246/21	364/61	189/21	111/19	2
Area C	58/5	166/14	85/10	51/9	3
TOTALS:	820/70	1190/10	612/68	361/61	4
(4) Weapons/sorties operationally required to achieve "over target" requirement shown above:					5
					6
	1000/85	1451/12	746/83	440/74	7
15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%.					8

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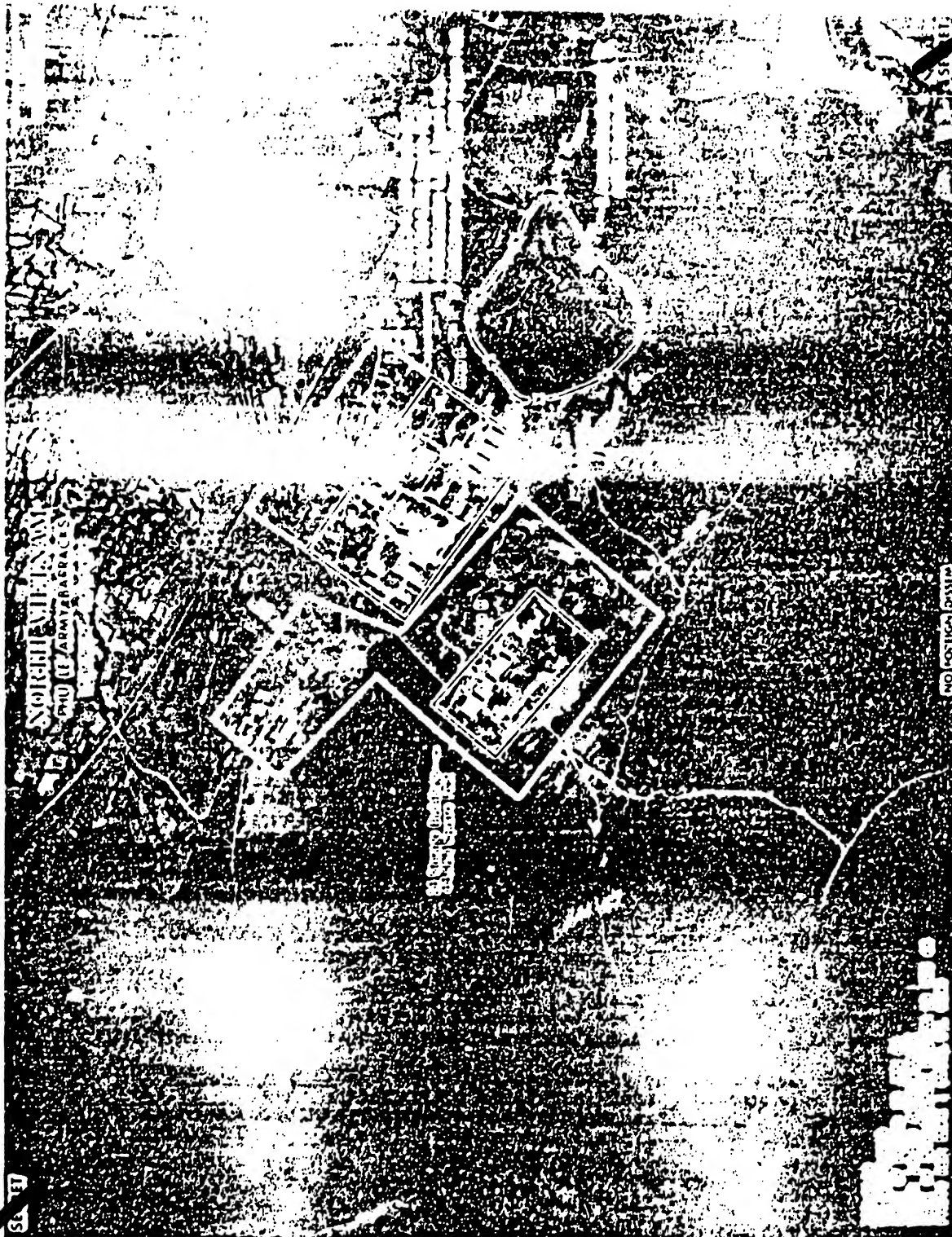
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Appendix A

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TAB V TO ANNEX C TO APPENDIX A

TARGET NO. 39.13



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Tab V to Annex C
to Appendix A

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 39.13 1
2. BE NUMBER: 617-0629 2
3. IDENTIFICATION: Phu Le Army Barracks and Supply Depot 3
4. DATE OF INFORMATION: 11 March 1965 4
DATE OF TIS: 28 May 1965 5
5. LOCATION: 17-36-50N/106-27-30E, UTM XE 548479, .5 NM SSE of Phu Le and approximately 13 NM NW of Dong Hoi. 6
7
6. DESCRIPTION: This installation consists of a barracks area, a storage and support area, and secured ammunition storage. Area 1 contains 11 barracks, 1 mess hall, 1 administration building, and 17 maintenance/support structures. Area 2 contains 14 storage buildings with a capacity of 44,825 sq ft. The ammunition storage area is fenced and partially secured on the north and south by personnel trench systems and contains 4 revetted buildings. These buildings provide 6,500 sq. ft. storage space. There are extensive trench systems and vehicle revetments scattered throughout the installation. Up to 2 battalions can be accommodated at this facility. 8
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19
7. SIGNIFICANCE: This target is a component of the Dong Hoi Military Complex and probably houses elements of the 325th Division. The 325th reportedly directs troops operations in the DMZ and possibly provides support to the Viet Cong and Pathet Laos. 20
21
22
23
24
8. TARGET ENVIRONMENT: This installation is bounded on the west and south by heavily wooded areas and immediately to the NNE is the abandoned rail line. North of the rail line is a secondary road which allows access to Route 1 to the east. 25
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28
9. DEFENSE ENVIRONMENT: No AAA is known to exist in the immediate vicinity of the target. Nearest AAA is located at Cuu Dinh (Quang Khe Naval Base), approximately 6 NM north, where two sites are active (3 57/85mm plus 1 to 4 light AAA). Three inactive sites (14 unoccupied positions are also in the adjacent area. Naval craft, with weapons up to 37mm, are normally berthed at Quang Khe. 29
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34
35
- Evidence of ground force strength (paragraphs 6 and 7) suggests the likelihood of prepared AW and rifle positions. 36
37
- Surface search radar is located at Quang Khe. However, Kniferest B and SCR-270 radars located at Dong Hoi (13 NM southeast) provide superior EW detection capability. 38
39
40
10. DAMAGE OBJECTIVE: Personnel casualties and destruction of stores. Damage criterion is structural damage to barracks and storage buildings, with accompanying casualties to personnel. Damage level is 30 percent. 41
42
43
44

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A-C-V-2

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Annex C to
Appendix A

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11. EFFECT ON NVN: Slight reduction of military and possible logistic support capability to assist and participate in VC/PL actions.

12. RECUPERABILITY: Utilizing locally available civilian personnel and troops for clearing debris and setting up temporary shelter, the depot and barracks area could probably resume limited operations within 24-36 hours. There is ample open area for field billeting. Replacement of personnel and supply stocks would probably require 3-5 days, depending upon availability and priorities within the general Dong Hoi Complex.

13. COLLATERAL DAMAGE: Insignificant.

14. RECOMMENDED WEAPONS AND SORTIES:

a. This is a large target complex comprised of two areas. Weapons and sorties have been computed for each area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target is also shown.

(1) In order to achieve a damage level of 30% weapons/sorties required over target:

Weapon:	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	750# BOMB
Area A	190/16		220/18		110/12		70/12
Area B	82/5		113/20		58/6		34/6
TOTALS:	272/21		333/38		168/18		104/18

(2) Weapons/sorties operationally required to achieve "over target" requirement shown above:

322/25	407/46	250/22	127/22
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(3) In order to achieve a damage level of 70% weapons/sorties required over target:

Weapon:	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	750# BOMB
Area A	640/53		740/62		370/41		236/39
Area B	276/23		380/31		195/22		115/19
TOTALS:	916/76		1120/93		565/63		351/58

(4) Weapons/sorties operationally required to achieve "over target" requirement shown above:

1120/93	1370/114	690/77	428/70
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15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%

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(Revised by 7th Note to Holders)

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TAB W TO ANNEX C TO APPENDIX A

TARGET NO. 39.14

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JCS: 39.14
BE: 0617.00099
DATE OF PHOTO: 1 JANUARY 1966
SCALE: 1:2,194
DATE OF INTELLIGENCE REVIEW: 23 FEBRUARY 1966
PHOTO REF. MILT 2, LV 0412

NO FOREIGN DISSEM

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 39.14 1
2. BE NUMBER: 617-0099 2
3. IDENTIFICATION: Ba Don Army Barracks 3
4. DATE OF INFORMATION: 12 March 1965 4
DATE OF TIS: 12 April 1965 5
5. LOCATION: 17-45-08N/106-26-12E, UTM XE 525634. 0.75 NM 6
west of Route 1 and 0.75 NM east of Ba Don, adjacent to Route 7
110L leading NW from Route 1. 8
6. DESCRIPTION: The target consists of 3 areas, A, B, and 9
C. Area A contains 23 buildings of which approximately 10 are 10
barracks, 2 administration buildings, 1 auditorium, and 10 11
support/supply buildings: entire area is surrounded by security 12
fence. Area B appears to contain 10 storage buildings and 13
area C is a storage area of 5 buildings. 14
7. SIGNIFICANCE: Target is possibly headquarters for 15
APSF (Armed Public Security Force) security troops, probably 16
in battalion strength. Installation appears related to local 17
defense and activities, and not a part of operational PAVN 18
elements. 19
8. TARGET ENVIRONMENT: Situated 2 NM from the Gulf of 20
Tonkin and just north of the Rao Nay. Area is cultivated 21
coastal lowland consisting of paddy fields and numerous 22
farming villages. Civilian population in a 2 mile radius 23
is approximately 3000. 24
9. DEFENSE ENVIRONMENT: There are 3 active medium sites 25
(57mm 85mm) containing 17 occupied positions and 2 active 26
light (.4.5mm-37mm) sites containing 10 occupied positions 27
in the Ba Don-Quang Khe area though none are directly 28
associated with the target. Six occupied 57/85mm positions 29
are located approximately 4 1/2 NM southeast, and a 4-position 30
(1 to 3 usually occupied sites) is located 3 1/2 NM southeast 31
of the target. Light AW is probably present in the target 32
area. Target is well within the range of EW radars at Vinh 33
Son and Dong Hoi. (DOI: 28 Jan and 12 Mar 1965). 34
10. DAMAGE OBJECTIVE: Destruction of barracks, adminis- 35
tration and storage buildings with accompanying personnel 36
casualties and destruction of supplies. Damage criterion 37
is structural damage to barracks and storage buildings. 38
Damage level is 30 percent. 39
11. EFFECT ON NVN: Destruction of target would reduce 40
effectiveness of security operations in sensitive coastal 41
area and Quang Khe Naval Base and other installations. 42
12. RECUPERABILITY: With 30% destruction achieved the 43
personnel could probably resume security operations in 4 to 44
6 hours, using remaining barracks and bivouac under canvas. 45
Replacement of supplies depends on priorities, probably taking 46
from 2 to 4 days. 47

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13. COLLATERAL DAMAGE: Insignificant.

14. RECOMMENDED WEAPONS AND SORTIES:

a. This is a large target complex comprised of three areas. Weapons and sorties have been computed for each area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target is also shown.

(1) In order to achieve a damage level of 30%, weapons/sorties required over target:

Weapon	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	750# BOMB
Area A	62/5		82/7		41/5		24/4
Area B	56/5		88/7		44/5		26/4
Area C	34/3		62/5		31/3		18/3
Totals	152/13		232/19		116/13		68/11

(2) Weapons/sorties operationally required to achieve "over target" requirement shown above:

186/16	283/23	142/16	83/4
--------	--------	--------	------

(3) In order to achieve a damage level of 70%, weapons/sorties required over target:

Weapon	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	750# BOMB
Area A	209/17		277/23		139/15		81/13
Area B	189/16		297/25		149/17		88/15
Area C	115/10		209/17		105/12		61/10
Totals	513/43		783/65		393/44		230/38

(4) Weapons/sorties operationally required to achieve "over target" requirement shown above:

626/53	955/79	480/54	281/47
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15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%

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A-C-W-3

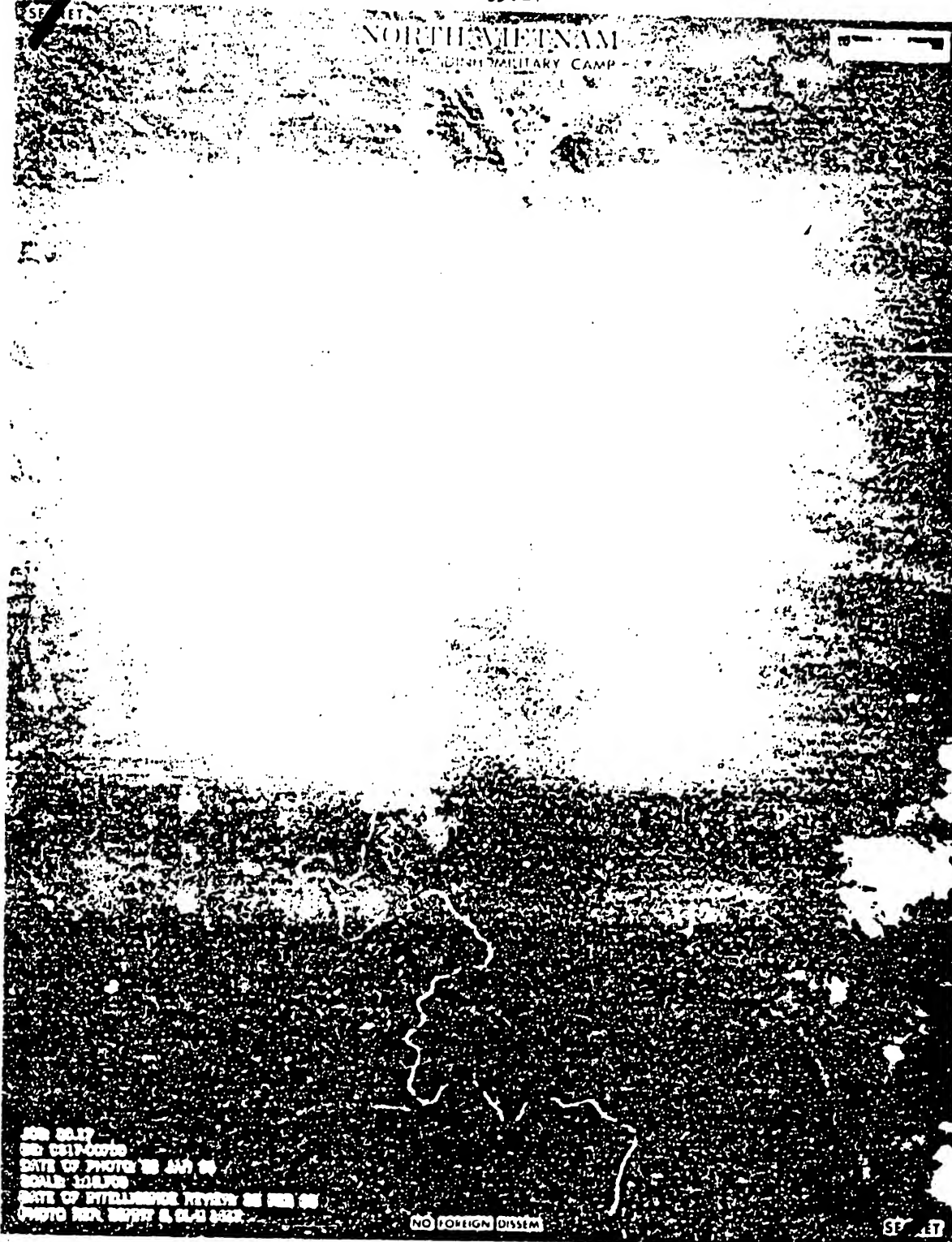
Tab W to
Annex C to
Appendix A

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TAB Z TO ANNEX C TO APPENDIX A

TARGET NO. 39.17



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A-C-Z-1

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to Appendix A

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 39.17 1
2. BE NUMBER: 617-0799 2
3. IDENTIFICATION: - Don Bai Dinh Military Camp 3
4. DATE OF INFORMATION: 21 April 1965 DATE OF TIS: 10 May 1965 4
5
5. LOCATION: 17-45-26N 105-46-26E, UTM WE 825632. 5.5 NM north of Mu Gia Pass. 6
7
6. DESCRIPTION: This target is along Route 12 and is located at a small village noted in the gazetteer as Don Bai Dinh. At this location an unidentified tributary joins the Rao Cai and both are crossed by fords. Immediately east of the target a road and bridge by-pass are being constructed which upon completion will eliminate dependence on the fords. There are 16 buildings in Area A. Area B is civilian in appearance and probably houses personnel engaged in the road and bridge construction. Area C (not covered in present photography) is fence-secured and contains 2 probable storage buildings and open storage space. 8
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7. SIGNIFICANCE: This target appears to be a rest and refuel point supporting the movement of troops and supplies enroute to Laos by way of Mu Gia Pass. Earlier photography disclosed considerable vehicular traffic in this area. The road and bridge construction is vital to the Viet Cong/Pathet Lao support effort. 19
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8. TARGET ENVIRONMENT: The target is along Route 12 and is surrounded by densely wooded and mountainous terrain. 25
26
9. DEFENSE ENVIRONMENT: 27
 - a. There are 3 inactive 14.5mm-37mm sites (12 unoccupied positions) and 2 inactive 12.7mm sites (6 unoccupied positions) in the vicinity of the target. In addition, there are 2 inactive 14.5mm-37mm sites (8 unoccupied positions) at Mu Gia and three 14.5mm-37mm sites (1 occupied/10 unoccupied positions) at Xom Thanh, approximately 9 NM north. (DOI: 22 March and 5 April 1965). 28
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 - b. AW positions and trenching are in evidence in the barracks area. 36
37
 - c. EW radar would be provided by radars at Dong Hoi and Vinh Son. 38
39
10. DAMAGE OBJECTIVE: Personnel casualties and disruption of military activities. Damage criterion is structural damage to the remaining housing and storage structures with accompanying personnel loss and destruction of supplies. Damage level is 30%. 40
41
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43
44
11. EFFECT ON NVN: Thirty percent damage level would disrupt the flow of supplies and infiltrators into Laos, thereby reducing one source of support to both the Pathet Lao and Viet Cong. 45
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48

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A-C-Z-2

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12. RECUPERABILITY: The barracks area would probably be operational within 36 hours after damage since ample space is available for field billeting. Replacement of supplies would require up to five days, less if high priority were assigned.

13. COLLATERAL DAMAGE:

a. None

b. Population

Casualties*

Target Area Adequate Area Target Area Adjacent Area

Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ
950	0	0	0	57	0	0	0

*Casualties estimated under daylight alert conditions.

14. RECOMMENDED WEAPONS AND SORTIES:

This installation is comprised of three areas. Weapons and sorties have been computed for each area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target are also shown:

(1) In order to achieve a damage level of 30%, weapons/sorties required over target:

WEAPON	250# SNAKEYE or	250# Bomb or	500# Bomb or	750# Bomb
Area A (450 x 500)	56/5	74/6	37/4	22/4
Area B (65 x 800)	20/1	72/6	36/4	21/3
Area C (70 x 150)	9/1	30/3	17/2	9/2
Totals	85/7	176/15	88/10	52/9

(2) Weapons/sorties operationally required to achieve "over target" requirements shown above:

104/9 215/18 107/12 63/11

(3) In order to achieve a damage level of 70%, weapons/sorties required over target:

WEAPON	250# SNAKEYE or	250# Bomb or	500# Bomb or	750# Bomb
Area A	189/16	250/21	125/14	74/12
Area B	67/6	246/20	122/13	71/12
Area C	31/2	102/9	51/6	31/5
Totals	287/24	598/50	298/33	176/29

(4) Weapons/sorties operationally required to achieve "over target" requirements shown above:

350/29 729/61 363/40 215/36

15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%.

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A-C-2-3

Tab 7 to
Annex C to
Appendix A

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TAB 29 TO ANN APPENDIX A

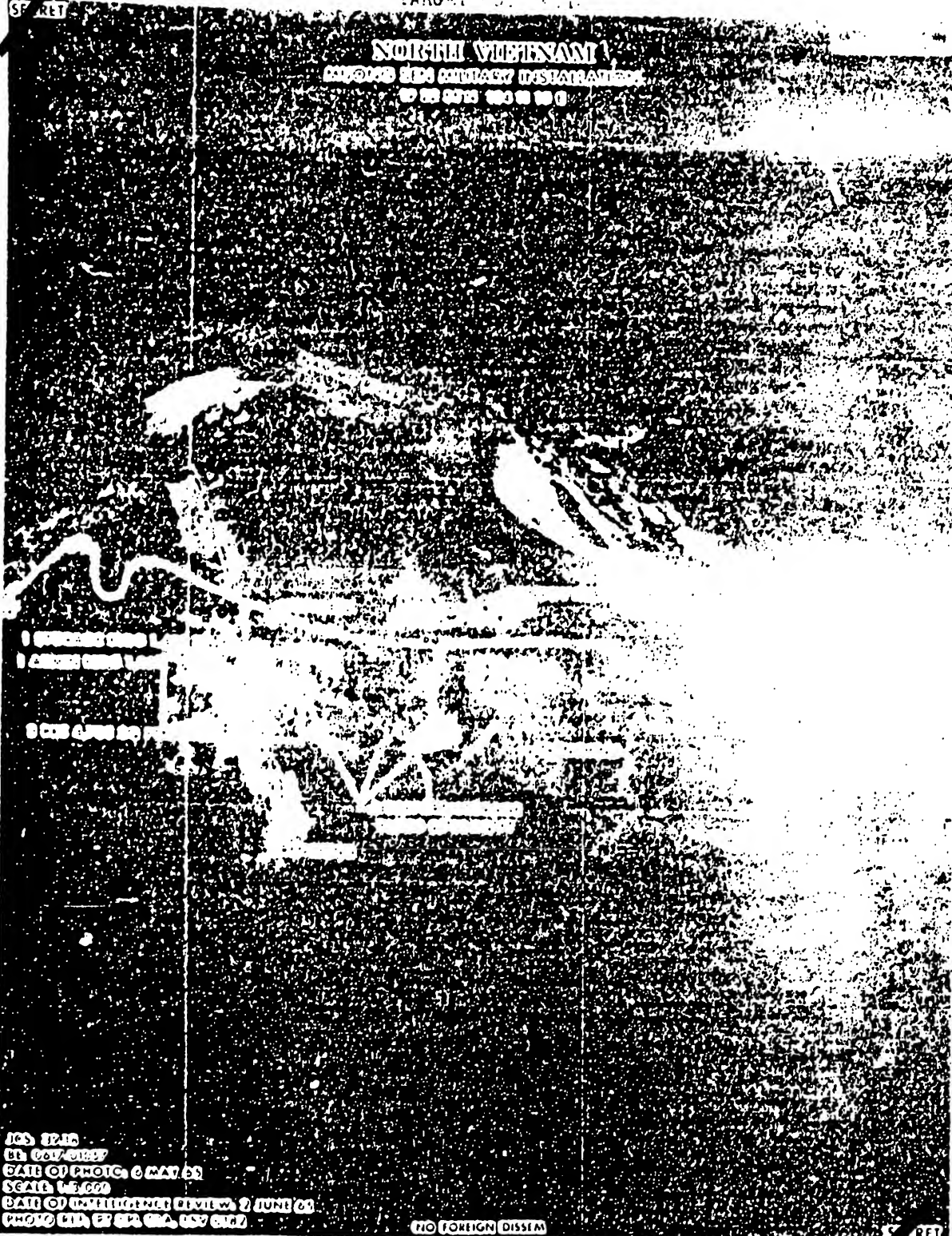
TARGET NO. 1

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NORTH VIETNAM

EXPOSURE 210 CONTACT INFORMATION

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DATE OF PHOTO: 6 MAY 68
SCALE: 1:5000
DATE OF INTELLIGENCE REVIEW: 2 JUNE 68
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Appendix A

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 39.18 1
2. BE NUMBER: 617-1057 2
3. IDENTIFICATION: Muong Sen Military Installation 3
4. DATE OF INFORMATION: 2 June 1965 DATE OF TIS: 11 June 1965 4
5
5. LOCATION: 19-22-55N 104-11-10E, UTM VG 146432, approximately 2.5 NM SE of Muong Sen. 6
7
6. DESCRIPTION: This installation is located south of the Nam Bo River and Route 7. The target complex is composed of 1 administration building, 1 storage building, 3 barracks and 1 small support structure. There is ample parking and turn-around space within the area. Approximately 100 yards east of the barracks are 1 large and 1 small storage/support buildings which are probably associated with a truck park in a wooded area to the south. Directly across Route 7 from the two storage/support buildings is a convoy staging and truck turn-around area. 8
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7. SIGNIFICANCE: This installation is possibly the command post controlling several military support facilities located along the western reaches of Route 7, one of the principal routes used in moving troops and supplies in support of the Pathet Lao. 18
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22
8. TARGET ENVIRONMENT: This area is mountainous with elevations from 500 to 5000 feet. Vegetation cover is dense and off-road movement would be difficult. The river valley is extremely narrow in this area. There are no civilian settlements nor cultivated fields in the vicinity of the target. 23
24
25
26
27
28
9. DEFENSE ENVIRONMENT: No AAA sites are evident in the immediate vicinity of the target; however, one inactive 6-position site is located approximately 1 NM to the east. These positions could possibly accommodate 57mm/85mm weapons. AW and small arms fire could be expected since personnel trenching is present south of the barracks area and east of the truck park. The 925th Security Bn has been reported in the Muong Sen area. 29
30
31
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35
36
10. DAMAGE OBJECTIVE: Destruction of command post facilities. Damage criterion is structural damage to the administration and barracks facilities with accompanying personnel casualties. Damage level is 30 percent. 37
38
39
40
11. EFFECT ON DRV: Thirty percent damage level would disrupt the flow of supplies and personnel into Laos, thereby temporarily reducing one major source of support to the Pathet Lao. 41
42
43
44
12. RECUPERABILITY: Command post functions and barracks operations could be resumed on a limited scale within a matter of hours if canvas shelter or undamaged housing is available. Replacement of stores and equipment could be effected within 3 days. 45
46
47
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49
13. COLLATERAL DAMAGE: Insignificant. 50

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A-C-Za-2

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14. RECOMMENDED WEAPONS AND SORTIES:

a. In order to achieve a damage level of 30%, weapons/
sorties required over target:

Weapon: 250# or 250# or 500# or 750#
SNAKEYE or BOMB or BOMB or BOMB

34/3 57/3 29/3 17/3

b. Weapons/sorties operationally required to achieve
"over target" requirements shown above:

41/4 69/6 35/4 21/4

c. In order to achieve a damage level of 70%, weapons/
sorties required over target:

115/10 193/16 98/11 58/10

d. Weapons/sorties operationally required to achieve
"over target" requirements shown above:

140/12 236/19 112/13 71/12

15. PROBABILITY OF ACHIEVING DAMAGE CRITERION: 50%

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A-C-Za-3

Tab Za to
Annex C to
Appendix A

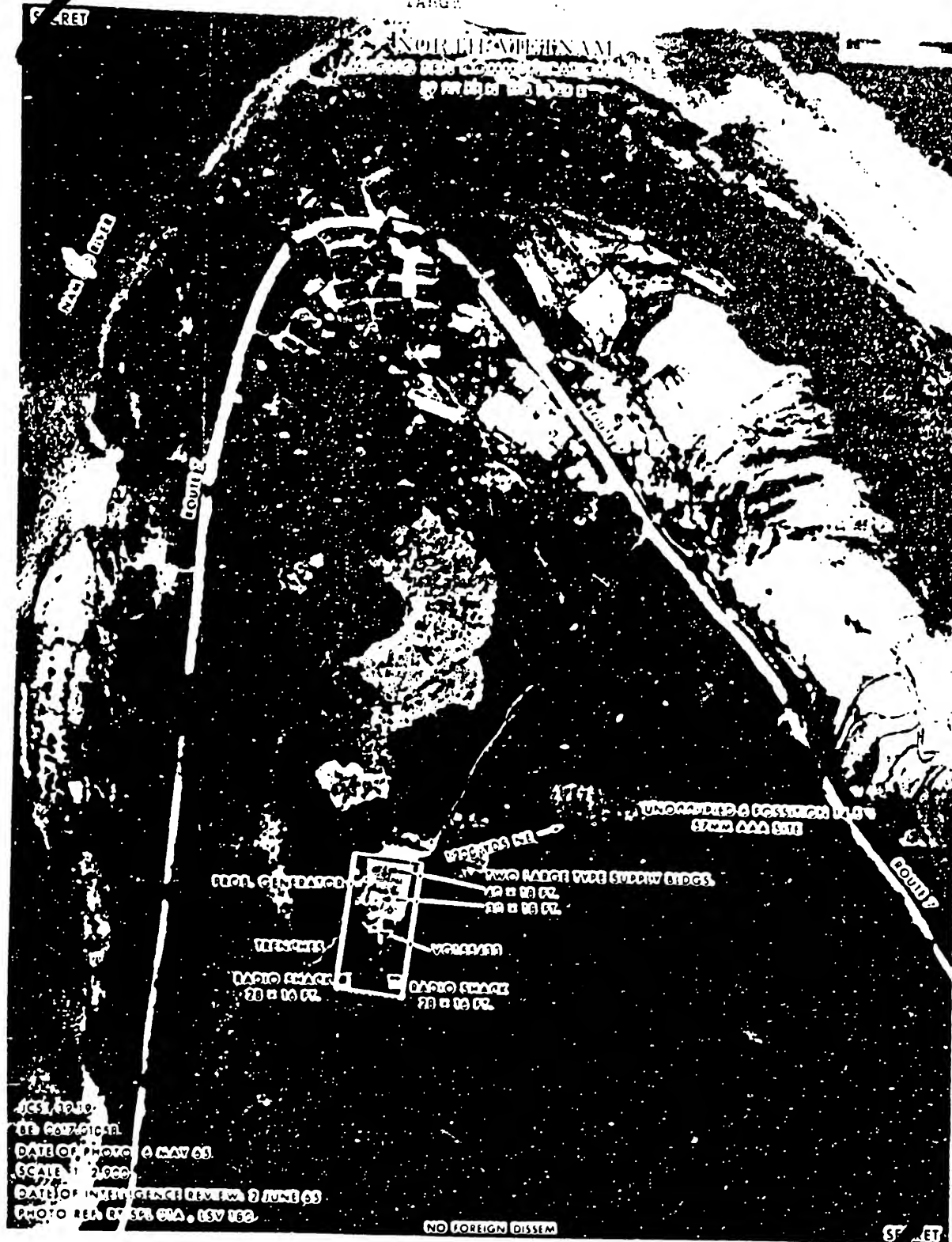
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TAP 26 TO ANNE NO APPENDIX A

TARGET

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SCANDALOUS

A-0-2b-1

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 39:19 1
2. B.E. NUMBER: 617-1058 2
3. IDENTIFICATION: Muong Sen Radio Comm Station 3
4. DATE OF INFORMATION: 6 May 1965 DATE OF TIS: 11 June 1965 4
5
5. LOCATION: 19-22-55N 104-11-45E, UTM VG 155433 6
6. DESCRIPTION: A small military radiocommunication station 7
consisting of two operation buildings with a long-wire antenna 8
directly overhead, supported by two stick type masts, one on 9
each end of the operation buildings. Two large support build- 10
ings and several smaller ones are located nearby. Facility 11
is about 3,300 feet west of the military installations, 6.6 nm 12
east of the Laos border, and served by a secondary road from 13
Route 7. 14
7. SIGNIFICANCE: This radio installation appears to be a 15
small, fixed-type tactical facility and of low capacity; how- 16
ever, it has the capability of providing long-range radio- 17
communications for PAVN units in this key border region of 18
North Vietnam/Laos. In addition, it is believed to serve as 19
a command and control link to PAVN units operating in Laos 20
and in-transit to South Vietnam. 21
8. TARGET ENVIRONMENT: Installation, 400 feet above sea 22
level, is 3.0 nm SE of Muong Sen, in a narrow valley of SE- 23
flowing Nam Mo (river). Target is on SW slope of the valley, 24
about 150 ft. above the valley bottom and 500 ft. from the 25
river. Valley floor, partly cultivated and partly wooded is 26
about 600 ft. wide. Route 7 generally parallels river, near 27
SW bank. Valley bordered on SW by forested mountains with 28
peaks 5,000 ft. above sea level within 5.0 nm of target; on 29
the NE, forested hills border valley; hilltops within 5.0 nm 30
of target reach 2500 ft. above sea level. 31
9. DEFENSE ENVIRONMENT: No AAA sites are evident in the 32
immediate vicinity of the target; however, one inactive 5- 33
position site is located approximately 1.5 nm to the east. 34
These positions could possible accommodate 57mm/85mm weapons. 35
AW and small arms fire could be expected since personnel 36
trenching is present south of the nearby barracks area and 37
east of the nearby truck park. The 925th Security Bn has been 38
reported in the Muong Sen area. 39
10. DAMAGE OBJECTIVE: Destruction of operation buildings 40
and antenna array. 41
11. EFFECT ON DRV: Interdiction of this radio communication 42
facility would disrupt long-distance electronic communications 43
in and out of this military significant border region. Military 44
units would have to switch to low-powered, tactical equipment 45
and they would thereby lose desired command and control link- 46
age to units operation at a distance from Muong Sen. 47
- a. Destruction of buildings housing electronic gear 48
would cause 75% or more damage to equipment. Very little 49
would be available. 50

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A-C-Zb-2

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Appendix A

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b. Repair to buildings could be accomplished in 1 to 2 weeks. 1
2

c. Electronic gear would have to be replaced, which would take from 1 to 4 weeks or possibly more; dependent on availability, technical assistance, and transportation factors. 3
4
5
6

d. Antennas of this type could be replaced in a matter of 24 hours or less. 7
8

NOTE: It must be remembered, limited radio communications could possible be established by use of tactical radio equipment, and temporarily erected long-wire antennas within a day or so, therefore this type facility must be under constant surveillance to keep out of operation. 9
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13. COLLATERAL DAMAGE: Insignificant. 14

14. RECOMMENDED WEAPONS AND SORTIES: 15

a. In order to achieve a damage level of 30%, weapons/sorties required over target: 16
17

Weapon:	250#	250#	500#	750#			
	<u>SNAKEYE</u>	or	<u>BOMB</u>	or	<u>BOMB</u>	or	<u>BOMB</u>
	12/1		38/3		20/2		12/2

 18

b. Weapons/sorties operationally required to achieve "over target" requirements shown above: 19
20

15/2	46/4	24/3	15/3
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 21

c. In order to achieve a damage level of 70%, weapons/sorties required over target: 22
23

41/4	128/11	68/8	41/7
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 24

d. Weapons/sorties operationally required to achieve "over target" requirements shown above: 25
26

50/4	156/13	82/9	50/8
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 27

15. PROBABILITY OF ACHIEVING DAMAGE CRITERION: 50% 28

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A-C-Zb-3

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Annex C to
Appendix A

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TAB AA TO ANNEX C TO APPENDIX A

TARGET NO. 39.2



(Revised 31 August 1965)

A-C-AA-1

TAB AA TO
Annex C to
Appendix A

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 39.2 1
2. BE NUMBER: 617-0081 2
3. IDENTIFICATION: Vinh Linh Army Barracks Central NE 3
4. DATE OF INFORMATION: 2 March 1965 DATE OF TIS: 4
5
5. LOCATION: 17 03 N 107 01 E UTM YD 1 at Vinh, 6
200 yards E of National Route 1, astride the road to Thuy Can. 7
6. DESCRIPTION: The Vinh Linh Army Barracks NE are part of 8
an active military complex which extends north along route 1 9
in the vicinity of Vinh Linh. Area A is secured by a wall and 10
trench system and contains 31 buildings: 2 administration 11
buildings, 1 assembly building, 1 mess hall, 11 barracks, 12
15 support structures and a probable transformer building. 13
Area B is a probable barracks area containing 12 buildings. 14
To the west of Area B is a parade ground and a trench and 15
fence-secured administration area. Area C is a motor pool 16
and contains 5 buildings and 3 semi-buried POL tanks of 200 17
bbls estimated capacity. Area D is a probable barracks area 18
containing 8 buildings. There is considerable trenching 19
evident and several inactive gun positions are scattered 20
throughout the entire area, evidence of past use for training 21
purposes. 22
7. SIGNIFICANCE: The installation appears to be headquarters 23
for supporting elements of the 270th Independent Infantry 24
Regiment which is currently carried heavily overstrength at 25
an estimated total of 5000. This target can house 1200 to 1500 26
personnel. It is well situated to assist infiltration to the 27
south and control movement along Route 1. 28
8. TARGET ENVIRONMENT: The target area is adjacent to the 29
town of Vinh Linh (Ho Ya) 6 NM W of Cap Lay and the Gulf of 30
Tonkin. It is in an area of flat lowland terrain and rice 31
cultivation and lies within 200 yards of Route 1. 32
9. DEFENSE ENVIRONMENT: 33
 - a. There are 5 active light (14.5mm-37mm) AAA sites, 34
amounting to 16 guns in the Chap Le-Vinh Linh area. 35
Additionally, there are 23 inactive sites, with 102 unoccupied 36
positions. Numerous prepared AW positions are located in 37
the military complex areas. (DOI: 8 - 19 Feb 65) 38
 - b. Estimated military population in the Vinh Linh-Chap 39
Le military complex runs as great as 5000. Target area 40
houses 1200 - 1500. The major areas of the target are 41
secured both by walls and by trenches, and a strong ground 42
defense could be provided. 43
 - c. Three early warning radars are located within a 10 44
NM radius of Vinh Linh, a KNIFEREST-B, an RUS-2, and an 45
SCR-270. 46
10. DAMAGE OBJECTIVE: Personnel casualties. Damage criterion 47
is structural damage to barracks and administration buildings 48
with accompanying personnel casualties. Damage level is 30%. 49

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A-C-AA-2

Tab AA to
Annex C to
Appendix A

(Revised by 7th Note to Holders)

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11. EFFECT ON NVN: Thirty percent damage level would disrupt the flow of supplies and infiltrators into Laos, thereby reducing one source of support to both the Pathet Lao and Viet Cong.

12. RECUPERABILITY: The barracks area would probably be operational within 36 hours after damage since ample space is available for field billeting. Replacement of supplies would require up to five days, less if high priority were assigned.

13. COLLATERAL DAMAGE: Insignificant.

14. RECOMMENDED WEAPONS AND SORTIES:

a. This is a large target complex comprised of four areas. Weapons and sorties have been computed for each area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target is also shown.

(1) In order to achieve a damage level of 30% weapons/sorties required over target:

Weapon:	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	750# BOMB	
Area A	95/8		124/10		64/7		37/6	19
Area B	44/4		72/6		38/4		22/4	20
Area C	19/2		41/3		22/2		13/2	21
Area D	21/2		43/4		22/2		13/2	22
Totals	179/16		280/30		146/15		85/14	23

(2) Weapons/sorties operationally required to achieve "over target" requirement shown above:

218/19	342/37	178/18	104/17	26
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(3) In order to achieve a damage level of 70% weapons/sorties required over target:

Weapon:	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	750# BOMB	
Area A	320/27		418/35		216/24		125/21	29
Area B	149/12		242/20		128/14		74/12	30
Area C	64/5		138/12		74/8		44/7	31
Area D	71/6		145/12		74/8		44/7	32
Totals	604/50		943/79		492/54		287/47	33

(4) Weapons/sorties operationally required to achieve "over target" requirement shown above:

218/61	1145/96	605/66	350/52	36
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15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50% 37

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A-C-AA-3

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Annex C to
Appendix A

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 39.22 1
2. BE NUMBER: 617-0556 2
3. IDENTIFICATION: Thanh Hoa Army Barracks S 3
4. DATE OF INFORMATION: 4 June 1969 4
5. DATE OF TISD: 24 June 1969 5
6. DATE OF PHOTOGRAPHY: 29 October 1964 6
7. DATE OF INTELLIGENCE REVIEW: 16 May 1969 7
8. LOCATION: 19-46-20N 105-46-31E, located 2 NM S of center of Thanh Hoa, near highway Route 1A. 8
9
6. DESCRIPTION: This target, oriented NNE/SSW consists of 3 areas comprising an aggregate of 72 buildings. Included in the 3 areas are 2 storage buildings, 3 administration buildings, 39 barracks, 1 gymnasium, 1 messhall, 24 support buildings, and 2 warehouses. Installation is served by a secondary road intersecting with Route 1A. Troop capacity is estimated to be 2000 men. 10
11
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14
7. SIGNIFICANCE: Troops at this location could provide a garrison for defense of Thanh Hoa. AAA units may be quartered here, as AAA defenses have increased. 15
16
17
8. TARGET ENVIRONMENT: Five hundred yards directly S of village of Ve Yen in the Song Ma delta area. Canals and paddy fields are adjacent to the area. 18
19
20
9. DEFENSE ENVIRONMENT: 21
 - a. The target is within the SAM envelope. 22
 - b. AAA activity has been identified within 3 NM of the target. 23
 - c. HMG and small arms fire is anticipated. 24
10. DAMAGE OBJECTIVE: Personnel casualties and destruction of supplies and equipment. 25
26
11. EFFECT ON NVN: Reduction of capability for defense of Thanh Hoa and support to elements to the S. 27
28
12. RECUPERABILITY: Operational functioning of troops could resume in 2-24 hours, with troops bivouacked under canvas. Repair of barracks would take 3-4 weeks. Replacement of supplies and equipment might require 5-10 days. 29
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~~SECRET~~ NO FOREIGN DISSEM EXCLUDED FROM AUTOMATIC DOWNGRADING

A-C-AAb-2

(Provided by 17th Note to Holders)

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Appendix A

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13. COLLATERAL DAMAGE:

a. Minor damage to surrounding area.

Population				*Casualties			
Target Area		Adjacent Area		Target Area		Adjacent Area	
Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ
1,200	0	200	300	72	0	2	3

*Casualties estimated under daylight alert conditions.

14. RECOMMENDED WEAPONS AND SORTIES:

This target is comprised of 3 areas. One area and 5 sub areas have been delineated for weapons application. Weapons and sorties have been computed for each area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target are also shown:

(1) In order to achieve a damage level of 30% , the following weapons/sorties are required:

WEAPON:	250#	500#	500#	750#
	SNAKEYE or	SNAKEYE or	BOMB or	BOMB
Area A-1 (1040'x135')	27/2	15/2	36/4	20/3
Area A-2 (760'x135')	21/2	11/1	28/3	15/3
Area B-1 (495'x60')	11/1	6/1	20/2	11/2
Area B-2 (100'x55')	6/1	4/1	13/1	7/1
Area B-3 (515'x150')	20/2	10/1	23/3	12/2
Area C (930'x130')	24/2	13/1	33/4	18/3
Totals	109/10	59/7	153/17	83/14

(2) Weapons/sorties operationally required to achieve "over target" requirements shown above:

131/12	71/8	184/20	100/17
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(3) In order to achieve a damage level of 70%, the following weapons/sorties are required:

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A-C-AAb-3

(Revised by 17th Note to Holders)

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Appendix A

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WEAPON	250# <u>SNAKEYE</u> or	500# <u>SNAKEYE</u> or	500# <u>BOMB</u> or	750# <u>BOMB</u>	
Area A-1	90/8	49/5	122/14	65/11	1
Area A-2	69/6	38/4	95/11	50/8	2
Area B-1	35/3	19/2	67/7	36/6	3
Area B-2	20/2	11/1	43/5	23/4	4
Area B-3	66/6	32/4	77/9	39/7	5
Area C	79/7	44/5	111/12	59/10	6
Total	359/32	193/21	515/58	272/46	7

(4) Weapons/sorties operationally required to achieve "over target" requirements shown above:

431/38	232/25	618/70	326/55	8
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15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%.

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A-C-AAb-4

(Added by 17th Note to Holders)

Tab AAb to
Annex C to
Appendix A

TAB AAC TO ANNEX C TO APPENDIX A

TARGET NO. 39.23



A-C-AAC-1

Tab AAC to
Annex C to
Appendix A

~~TOP SECRET~~

TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 39.23 1
2. BE NUMBER: 617-0814 2
3. IDENTIFICATION: Thanh Hoa Barracks, SSE 3
4. DATE OF INFORMATION: 14 May 1965 DATE OF TIS: 4
3 June 1965 5
5. LOCATION: 19-45-3CN/105-51-00E, UTM WG 887847, 5 NM SSE 6
of Thanh Hoa, 500 yds NE of Thanh Hoa-Sam Son road. 7
6. DESCRIPTION: An active military area surrounded by a 8
security fence. Contains a total of 38 buildings and 1 under 9
construction, including 4 administration-type buildings, 2 10
mess halls, 10 barracks-type buildings (59,850 square feet), 11
9 storage buildings (25,425 square feet), and 3 support-type 12
buildings. Troop capacity is about 1,200. Five hundred yards 13
N is a training area with several trenches and strong points. 14
7. SIGNIFICANCE: Area has capacity for two battalions. 15
May be headquarters for Thanh Hoa provincial security batta- 16
lions (Armed Public Security Forces) or independent infantry 17
troops stationed in the area. 18
8. TARGET ENVIRONMENT: Adjacent to village of Thuong Thon 19
about 500 yards N of Thanh Hoa-Sam Son road in low delta 20
marshland and paddy fields. 21
9. DEFENSE ENVIRONMENT: AAA defenses in the area are 22
located in the vicinity of Thanh Hoa. From 4 to 7 NM NW of 23
the target area are 15 active 14.5mm-37mm sites with a total 24
of 44 occupied positions. There are 2 active 57mm-85mm sites 25
with 13 occupied positions and 17 occupied HMG (12.7mm) posi- 26
tions. There are 6 inactive 14.5mm-37mm sites with 23 27
unoccupied positions and 1 inactive 8-position 57mm-85mm site. 28
Target is within the capabilities of EW radar at My Duc, 29
approximately 9 NM NE. Small arms ground fire can be antici- 30
pated from troops in the area. 31
10. DAMAGE OBJECTIVE: Casualties to security forces per- 32
sonnel, damage to administrative equipment and supplies. 33
11. EFFECT ON DRV: Reduction in area security and Thanh 34
Hoa defenses. Loss of security administration in Thanh Hoa 35
province. 36
12. RECUPERABILITY: Functioning of troops in this area 37
could be resumed within 12 hours by bivouacking under canvas 38
or quartering in private homes. Barracks could be repaired/ 39
reconstructed in 3-4 weeks. Loss of administrative records 40
and supplies might be significant. 41
13. COLLATERAL DAMAGE: Light damage to surrounding area. 42

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A-C-AAc-2

Tab AAc to
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Appendix A

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14. <u>RECOMMENDED WEAPONS AND SORTIES:</u>	1
a. In order to achieve a damage level of 30%, weapons/ sorties required over target:	2 3
Weapon: 250# 250# 500# 750# <u>SNAKEYE</u> or <u>BOMB</u> or <u>BOMB</u> or <u>BOMB</u>	
126/11 160/13 82/9 48/8	4
b. Weapons/sorties operationally required to achieve "over target" requirements shown above:	5 6
153/13 195/16 103/11 58/10	7
c. In order to achieve a damage level of 70%, weapons/ sorties required over target:	8 9
425/35 540/45 276/31 165/28	10
d. Weapons/sorties operationally required to achieve "over target" requirements shown above:	11 12
518/43 660/55 336/38 202/34	13
15. <u>PROBABILITY OF ACHIEVING DAMAGE CRITERION:</u> 50%	14

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A-C-AAc-3

Tab AAc to
Annex C to
Appendix A

T/B Add TO ANNEX TO APPENDIX A

TARGET NO. 000000



NORTH VIETNAM
CAN CONG BANG

HO CHI MINH CITY

SEE PAGE 1

A-C-0000-1

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 39.24 1
2. B.E. NUMBER: 617-0815 2
3. IDENTIFICATION: Sam Son Army Barracks, W. 3
4. DATE OF INFORMATION: 6 May 1965 DATE OF TIS: 3 June 1965 4
5
5. LOCATION: 19-44-48N, 105-52-15E, UTM WG 913835, 2 NM W of Sam Son on N side of main road to Thanh Hoa. 6
7
6. DESCRIPTION: An active military area, fence secured, and containing 11 barracks, 1 large administration building, 1 mess hall, 10 miscellaneous support-type buildings, and a parade ground. Troop capacity 1000-1200. 8
9
10
11
7. SIGNIFICANCE: The 478th Coastal Security Bn has been reported in this area. Coastal defense positions could be manned by personnel billeted at this location. 12
13
14
8. TARGET ENVIRONMENT: Barracks are immediately adjacent to the village of Van Phu, just W of a river area of low marshland and paddy fields. 15
16
17
9. DEFENSE ENVIRONMENT: There are 2 active 12.7 HMG sites within 2 NM of the area, with a total of 9 occupied positions. There are also 6 inactive 14.5 mm-37mm sites, with a total of 27 unoccupied positions. Two unoccupied coastal gun sites of four positions each are in the Cap Chao vicinity. Target is within the capabilities of EW radars in the My Duc area approximately 10 NM N. Small arms fire may be anticipated in the area of Cap Chao. 18
19
20
21
22
23
24
25
10. DAMAGE OBJECTIVE: Casualties to coastal security troops or other APSF (Armed Public Security Force) troops. 26
27
11. EFFECT ON DRV: Reduction of coastal defense capability in the area, rendering more vulnerable the approaches to the Song Ma estuary. 28
29
30
12. RECUPERABILITY: Functioning of troops in this area could be resumed within 12 hours, quartering troops under canvas or in nearby civilian housing. Significant might be loss of military facilities for the area. Barracks could be repaired and/or restored in 3-4 weeks. 31
32
33
34
35
13. COLLATERAL DAMAGE: Insignificant. 36
14. RECOMMENDED WEAPONS AND SORTIES: 37
 - a. In order to achieve a damage level of 30%, weapons/sorties required over target: 38
39

Weapon:	250#	250#	500#	750#
	<u>SNAKEYE</u>	<u>BOMB</u>	<u>BOMB</u>	<u>BOMB</u>
	80/7	106/9	54/6	32/5

40
 - b. Weapons/sorties operationally required to achieve "over target" requirements shown above: 41
42

98/9	128/11	66/6	39/7
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43

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A-C-AAd-2

Tab AAd to
Annex C to
Appendix A

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c. In order to achieve a damage level of 70%, weapons/
sorties required over target:

Weapon:	250# <u>SNAKEYE</u>	or	250# <u>BOMB</u>	or	500# <u>BOMB</u>	or	750# <u>BOMB</u>
	270/23		357/30		182/20		108/18

d. Weapons/sorties operationally required to achieve
"over target" requirements shown above:

318/28	435/36	222/24	127/22
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15. PROBABILITY OF ACHIEVING DAMAGE CRITERION: 50%

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A-C-AAAd-3

Tab AAd to
Annex C to
Appendix A

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TAB AAe TO ANNEX C TO APPENDIX A

TARGET NO. 39.25

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A-C-AAe-1

Tab. AAe to Annex C to Appendix A

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 39.25 1
2. BE NUMBER: 617-0124 2
3. IDENTIFICATION: Vinh Son Army Barracks S. 3
4. DATE OF INFORMATION: 14 May 1965 DATE OF TIS: 4
20 Dec 1965 5
5. LOCATION: 18-52-37N, 105-19-07E. UTM 48Q WF 337867, 6
1.5 NM SSE of Vinh Son, 25 NM NW of Vinh. 7
6. DESCRIPTION: In the two JCS-targeted areas are 30 barracks-8
type buildings, an administration building, 9 warehouse-type 9
structures, about 13 support-type buildings, including mess 10
halls, and some unidentified structures. This appears an 11
operational headquarters area with a troop capacity of up to 12
3,500. Trenches have been prepared in the area, and a parade 13
ground is located at the SE side of the general area. NW and 14
E of the targeted locations are training areas and other 15
probable barracks and support buildings. 16
7. SIGNIFICANCE: This installation is part of the large 17
Vinh Son (Anh Son) military complex that is used by the 324th 18
Infantry Brigade. This area could be brigade headquarters, 19
which have been reported near this site. 20
8. TARGET ENVIRONMENT: Target is located on a small hill 21
in generally flat lowland just east of the Song Ca River and 22
adjacent to Route 7. Surrounding area is crossed by small 23
and large canals and contains numerous blocks of cultivated 24
fields interspersed with scattered civilian settlements. 25
9. DEFENSE ENVIRONMENT: 26
 - a. In the immediate area is an active 14.5mm/37mm AAA 27
site with 4 occupied positions and an active HMG site with 28
6 occupied positions. There are 2 inactive 57/85mm sites 29
with 16 unoccupied positions, 5 inactive 14.5/37mm sites 30
with 27 unoccupied positions, and 4 inactive HMG sites with 31
19 unoccupied positions. 32
 - b. Area is covered by the Anh Son EW radar in the 33
immediate area and the EW and height finder radar at Vinh. 34
 - c. Ground troops can support with heavy small arms and 35
A/W fire from prepared positions in the area. 36
10. DAMAGE OBJECTIVE: Structural damage to barracks and 37
support buildings with accompanying loss of equipment and 38
personnel casualties. Damage level is 30%. 39
11. EFFECT ON DRV: Reduction in effectiveness of troops 40
stationed along main route to Laos (Route 7) and reduction 41
of support and training capability for Pathet Lao infiltra- 42
tion. 43
12. RECUPERABILITY: Area could probably be operational 44
on a reduced level in 12-24 hours. Restoration to full 45
effectiveness would depend on replacement of key personnel 46
and equipment--probably 5 days. 47

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A-C-AAe-2

Tab AAe to
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SECRET

13. COLLATERAL DAMAGE: Insignificant.

1

14. RECOMMENDED WEAPONS AND SORTIES:

2

a. This target complex is comprised of two areas. Weapons and sorties have been computed for both areas. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target is also shown.

3
4
5
6
7

(1) In order to achieve a damage level of 30 percent weapons/sorties required over target:

8
9

Weapon:	250# <u>SNAKEYE</u>	or	250# <u>BOMB</u>	or	500# <u>BOMB</u>	or	750# <u>BOMB</u>	
Area A	178/15		211/18		108/12		64/10	10
Area B	118/10		173/14		89/10		52/9	11
Totals:	296/25		384/32		197/22		116/19	12

(2) Weapons/sorties operationally required to achieve "over target" requirement shown above:

13
14

362/31	456/39	242/27	142/23	15
--------	--------	--------	--------	----

(3) In order to achieve a damage level of 70 percent weapons/sorties required over target:

16
17

Weapon:	250# <u>SNAKEYE</u>	or	250# <u>BOMB</u>	or	500# <u>BOMB</u>	or	750# <u>BOMB</u>	
Area A	600/50		712/59		364/41		216/36	18
Area B	398/33		583/49		300/33		175/29	19
Totals:	998/83		1295/108		664/74		391/65	20

(4) Weapons/sorties operationally required to achieve "over target" requirement shown above:

21
22

1220/102	1560/137	805/90	476/79	23
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15. PROBABILITY OF ACHIEVING DAMAGE LEVEL: 50%

24

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A-C-AAg-3

Tab AAg to
Annex C to
Appendix

(Revised by 7th Note to Holders)

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TAB AAF TO ANNEX C TO APPENDIX A

TARGET NO. 39.26



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Sub Add to Appendix C
to Appendix A

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 39.26 1
2. D.E. NUMBER: 617-0624 2
3. IDENTIFICATION: Dong Cao Thon Army Barracks 3
4. DATE OF INFORMATION: 12 July 1965 4
DATE OF TIS: 10 March 1966 5
DATE OF PHOTOGRAPHY: 3 June 1965 6
DATE OF INTELLIGENCE REVIEW: 4 June 1965 7
5. LOCATION: 17-50-28N/106-05-10E, UTM XE 150731, 38 NM 8
WNW of Dong Hoi, approximately 0.8 NM SSE of Dong Cao Thon. 9
6. DESCRIPTION: This active military installation com- 10
prises 4 separate areas containing approximately 153 major 11
buildings, including 81 barracks. There are two 6-position 12
AAA sites and support area in the open area between the 13
central and southeastern barracks complexes. There appears to 14
be several strongpoints, bunkers and personnel and communica- 15
tion trenches that have been prepared in and around the four 16
areas. 5,500 troops, 2.7% of targeted capacity. 17
7. SIGNIFICANCE: No known military units are identified 18
with this area, but size and layout indicate a full brigade 19
could be located here (5,500 capacity). Yen Duc Militia 20
Training Center has been reported located in this district 21
(Tuyen Hoa). Location is only 12 NM SE of where Route 12 22
turns S to Mu Gia Pass. 23
8. TARGET ENVIRONMENT: Approximately 0.6 NM S of the Rao 24
Nay and separated from it by an eroded limestone ridge, the 25
target lies along the abandoned railroad between Dong Hoi and 26
Vinh. It is about 18 NM NE of the Laos border. Area on both 27
sides of the narrow Rao Nay valley consists of steep, heavily 28
wooded limestone ridges. 29
9. DEFENSE ENVIRONMENT: There are two inactive light 30
(14.5 MM - 37 MM) AAA sites containing 6 unoccupied positions 31
within the target area. Target is within the range of Vinh 32
Son and Dong Hoi EW radars. Heavy small arms fire can be 33
anticipated from operational troops in the area. 34
10. DAMAGE OBJECTIVE: Structural damage to barracks and 35
support buildings with accompanying damage to supplies and 36
personnel casualties. Damage level is 30 per cent. 37
11. EFFECT ON NVN: Will reduce support of NVN forces to 38
Viet Cong as well as reduce forces available for defense of DMZ. 39
12. RECUPERABILITY: Barracks area could probably be opera- 40
tional in 12 to 24 hours on a reduced operational program. 41
During this current monsoon season, supplies and equipment 42
destroyed may not be replaced for from 5 - 10 days. 43

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A-C-AAP-2

Tab AAP to
Annex C to
Appendix A

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13. COLLATERAL DAMAGE: Insignificant.

14. RECOMMENDED WEAPONS AND SORTIES:

a. This target complex is comprised of four areas. Weapons and sorties have been computed for each area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target is also shown.

(1) In order to achieve a damage level of 30% weapons/sorties required over target:

Weapon:	250# <u>SNAKEYE</u>	250# <u>BOCB</u>	500# <u>BOMB</u>	750# <u>BOMB</u>	
Area A	67/6	90/8	46/5	27/5	10
Area B	81/7	104/9	54/6	32/5	11
Area C	155/13	182/15	94/10	55/9	12
Area D	99/8	121/10	62/7	37/6	13
Totals:	402/34	497/42	256/28	151/25	14

(2) Weapons/sorties operationally required to achieve "over target" requirement shown above:

512/42	608/51	312/34	184/31	17
--------	--------	--------	--------	----

(3) In order to achieve a damage level of 70% weapons/sorties required over target:

Weapons:	250# <u>SNAKEYE</u>	250# <u>BOMB</u>	500# <u>BOMB</u>	750# <u>BOMB</u>	
Area A	226/19	302/25	155/17	91/15	20
Area B	273/23	350/29	182/20	108/18	21
Area C	522/43	613/51	317/35	185/31	22
Area D	334/28	407/34	209/23	125/21	23
Totals:	1355/113	1672/139	863/95	509/85	24

(4) Weapons/sorties operationally required to achieve "over target" requirement shown above:

1650/138	2042/170	1050/112	620/104	27
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15. PROBABILITY OF ACHIEVING DAMAGE LEVEL: 50%

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A-C-AAF-3

Tab AAF to
Annex C to
Appendix

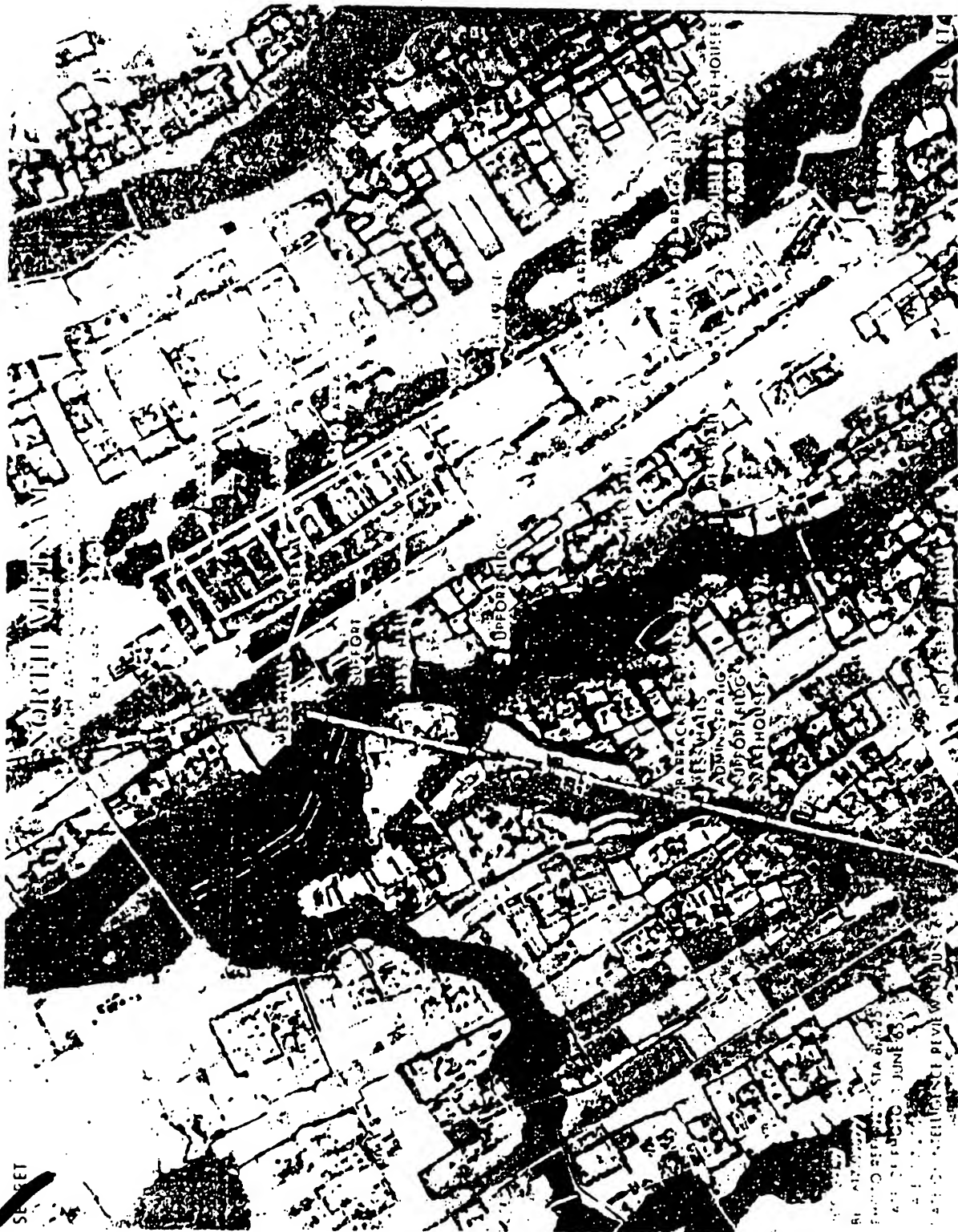
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TAB AAG TO ANNEX C TO APPENDIX A

TARGET NO. 20.27



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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 39.27 1
2. BE NUMBER: 617-0077 2
3. IDENTIFICATION: Vinh Army Barracks NNE 3
4. DATE OF INFORMATION: 25 June 1965 DATE OF TIS: 30 June 1965 4
5
5. LOCATION: 18-43-44N, 105-41-28E, UTM WF 729711, approximately 5 NM NE of Vinh, approximately 1650 yards E of Vinh Airfield. 6
7
8
6. DESCRIPTION: Vinh Army Barracks NNE covers 50 acres enclosed with fencing and contains 32 barracks, 4 mess halls, 1 administration building, 2 double-bay warehouses, and approximately 6 support structures. There is a drill field in the center of the facilities and a small possible training area is located beyond the fence at the northernmost end of the installation. Not all buildings are within the 2 designated JCS target locations. This barracks area can accommodate up to 2,500 troops, 2.3 percent of target's capacity. 9
10
11
12
13
14
15
16
17
7. SIGNIFICANCE: Probably location of an AAA regiment or of one of two independent infantry regiments assigned to the defense of Vinh and Vinh Airfield. 18
19
20
8. TARGET ENVIRONMENT: This area lies in the low deltaic coast to the N and NE of Vinh, only a few feet above sea level. The area is heavily cultivated and long rows of paddy fields are dotted with clusters of farm villages. 21
22
23
24
9. DEFENSE ENVIRONMENT: 25
 - a. Within 2 NM of the target are 2 active and 3 inactive 57mm/85mm sites (14 occupied/24 unoccupied positions). There are also 3 active and 2 inactive 14.5mm/37mm sites (12 occupied and 8 unoccupied positions). Total AAA defenses in the Vinh area include 16 active 57/85mm sites (105 positions occupied, 17 unoccupied). 26
27
28
29
30
31
 - b. Radar installations in the area include EW, HF and FC radars. 32
33
 - c. Heavy small arms and A/W fire may be expected from 2 infantry regiments and other support troops carried in the area. 34
35
36
10. DAMAGE OBJECTIVE: Structural damage to buildings with resulting loss of personnel and equipment. Damage level is 30 percent. 37
38
39
11. EFFECT ON DRV: Reduce effectiveness of Vinh and Vinh Airfield defenses by inflicting casualties on forces assigned to defense of the area. 40
41
42
12. RECUPERABILITY: Barracks area could probably be operational at a reduced level in 12 to 24 hours. Replacement of casualties and destroyed equipment would take 3-15 days depending on priorities. 43
44
45
46

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A-C-AAG-2

Tab AAg to
Annex C to
Appendix A

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13. COLLATERAL DAMAGE: Insignificant.

14. RECOMMENDED WEAPONS AND SORTIES:

a. This target complex is comprised of two areas. Weapons and sorties have been computed for both areas. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target is also shown.

(1) In order to achieve a damage level of 30 percent weapons/sorties required over target:

Weapon:	250# <u>SNAKEYE</u>	or	250# <u>BOMB</u>	or	500# <u>BOMB</u>	or	750# <u>BOMB</u>	
Area A	104/9		144/12		74/8		44/7	10
Area B	82/7		121/10		62/7		37/6	11
Totals:	186/16		265/22		136/15		81/13	12

(2) Weapons/sorties operationally required to achieve "over target" requirement shown above:

226/20	323/	169/19	100/16	15
--------	------	--------	--------	----

(3) In order to achieve a damage level of 70 percent weapons/sorties required over target:

Weapon:	250# <u>SNAKEYE</u>	or	250# <u>BOMB</u>	or	500# <u>BOMB</u>	or	750# <u>BOMB</u>	
Area A	350/29		485/40		250/28		148/25	13
Area B	276/23		408/34		209/23		125/21	19
Totals:	626/52		893/74		459/51		273/46	20

(4) Weapons/sorties operationally required to achieve "over target" requirement shown above:

758/63	1090/91	560/61	333/56	23
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15. PROBABILITY OF ACHIEVING DAMAGE LEVEL: 50%

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A-C-AAg-3

Tab AAg to
Annex C to
Appendix A

(Revised by 7th Note to Holders)

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TAB AAH TO ANNEX C TO APPENDIX A

TARGET NO. 39.28

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(Revised 31 August 1965)

A-C-2An-1

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 39.28 1
2. B.E. NUMBER: 617-0324. 2
3. IDENTIFICATION: Bai Thuong Army Barracks NE 3
4. DATE OF INFORMATION: 12 May 1965 DATE OF TIS: 13 July 1965 4
5
5. LOCATION: 19-54-31N 105-27-53E, UTM WH 490013, 4 NM 6
ENE of RJ 15/118 at Bai Thuong. 18.8 NM WNW of Thanh Hoa. 7
6. DESCRIPTION: This target area in general comprises 8
8 major military areas and other small clusters of barracks 9
and support type buildings. It includes the Hai Trach ammo 10
storage area (a comparatively small ammo supply area for 11
brigade requirements only) and buildings and training areas 12
for approximately 3 battalions together with support troops. 13
Photographic holdings indicate the beginning of airfield con- 14
struction with probable MIG capability in the center of this 15
complex. 16
7. SIGNIFICANCE: This area contains elements of the 330th 17
Infantry Brigade. Collateral information locates 2 infantry 18
battalions and an engineer battalion at this location. Pho- 19
tography shows an airfield under construction. 20
8. TARGET ENVIRONMENT: Target is located in the flat, 21
well-populated lowland of the Song Chu valley. There are 22
many canals for paddy field irrigation and drainage in the 23
immediate area. 8 NM W are wooded ridges trending generally 24
NNW and SSE and rising to 1600 ft. Gulf of Tonkin is 28 NM E. 25
9. DEFENSE ENVIRONMENT: There are no known AAA active 26
positions in the target area. There is an inactive possible 27
14.5mm/37mm site with 8 unoccupied positions. There are 28
training trenches and unoccupied HMG sites and heavy small 29
arms fire will be encountered from operational troops in the 30
area. EW radars are 28 NM E at My Duc. Both light and 31
medium AAA positions are occupied at Thanh Hoa, 19 NM SE. 32
10. DAMAGE OBJECTIVE: Structural damage to barracks and 33
support buildings with accompanying loss of equipment and 34
personnel casualties. Damage level is 30%. 35
11. EFFECT ON DRV: Reduction of troop training capability 36
in support of South Vietnam penetration and delay in airfield 37
construction. 38
12. RECUPERABILITY: Area could probably be operational on 39
a reduced level in 24 hours. Loss of personnel and engineer 40
equipment would delay airfield construction pending replace- 41
ment, probably up to 30 days. 42
13. COLLATERAL DAMAGE: Insignificant. 43
14. RECOMMENDED WEAPONS AND SORTIES: 44
 - a. This is a large target complex comprised of eight 45
areas. Weapons and sorties have been computed for each 46
area. To show the effort required to achieve the damage 47

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A-C-AAH-2

Tab AAH to
Annex C to
Appendix A

(Revised by 6th Note to Holders - 25 March 1966)

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level prescribed, total weapons/sorties required over the target is also shown.

(1) In order to achieve a damage level of 30% weapons/sorties required over target:

Weapon:	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	750# BOMB	
Area A	204/17		237/20		122/13		71/12	5
Area B	143/12		170/14		88/10		51/8	6
Area C	59/5		80/7		41/5		24/4	7
Area D	87/7		116/10		60/7		35/6	8
Area E	304/25		357/30		183/20		107/18	9
Area F	127/11		162/13		85/9		49/8	10
Area G	95/8		122/10		64/7		19/3	11
Area H	32/3		63/5		33/4		19/3	12
Totals:	1051/88		1307/109		676/75		393/65	13

(2) Weapons/sorties operationally required to achieve "over target" requirement shown above:

1281/107 1593/133 824/92 479/80

(3) In order to achieve a damage level of 70% weapons/sorties required over target:

Weapons:	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	750# BOMB	
Area A	687/57		799/67		412/96		240/40	19
Area B	482/40		573/48		297/33		172/29	20
Area C	199/17		270/22		138/15		81/13	21
Area D	1025/85		1205/100		617/69		360/60	22
Area E	428/36		542/45		286/32		165/27	23
Area F	428/36		542/45		286/32		165/27	24
Area G	320/27		410/35		216/24		125/21	25
Area H	108/9		212/18		111/12		64/11	26
Totals:	3542/295		4402/367		2279/252		1325/221	27

(4) Weapons/sorties operationally required to achieve "over target" requirement shown above:

4319/360 5368/447 2779/309 1616/269

15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%

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Tab AAh to
Annex C to
Appendix A

(Revised by 7th Note to Holders)

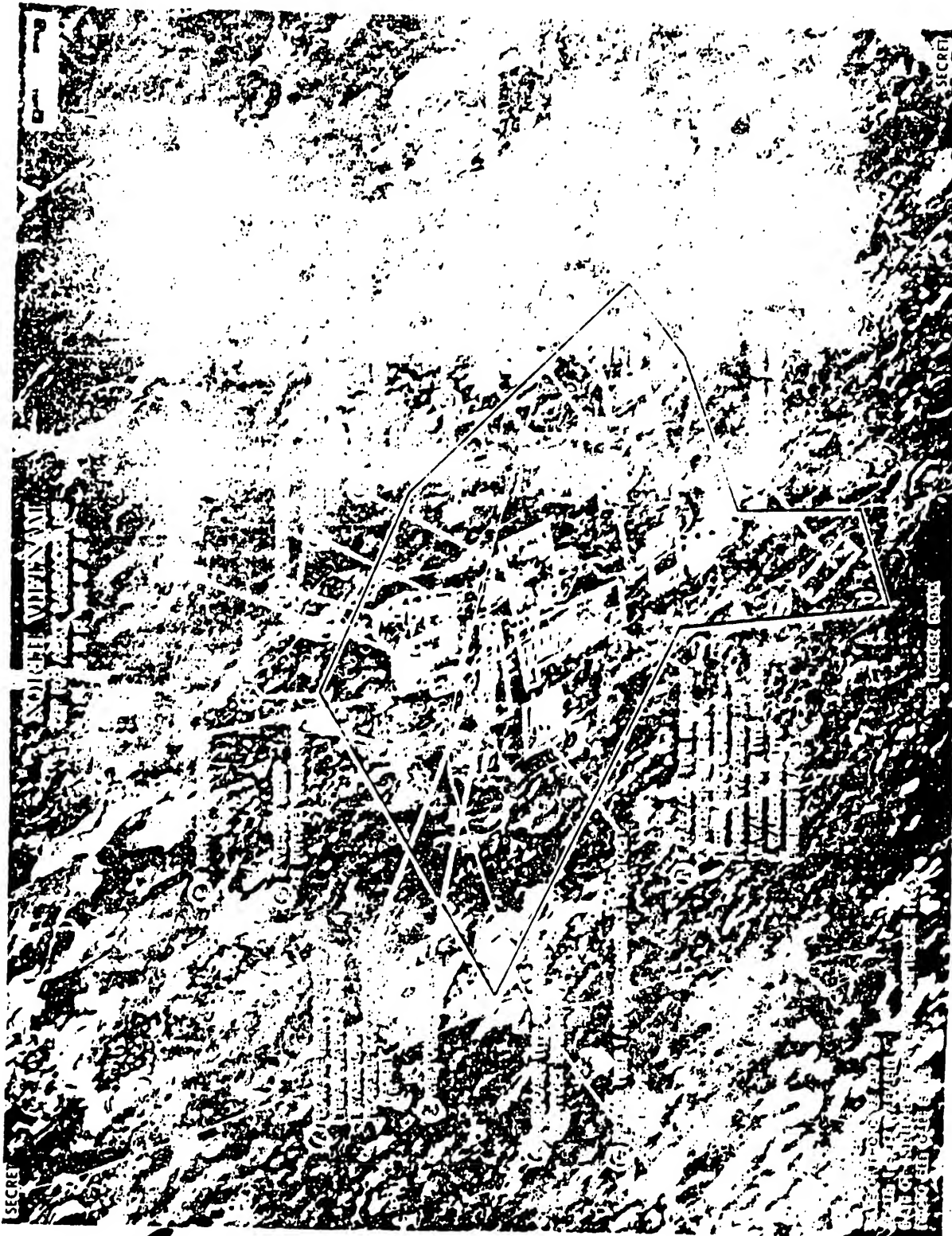
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TAB AA1 TO ANNEX C TO APPENDIX 1

TARGET NO. 102



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(Reviewed by 10th N/H)

A-C AA-1

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 39.29 1
2. BE NUMBER: 616-0467 2
3. IDENTIFICATION: Kep Ha Army Bks NE 3
4. DATE OF INFORMATION: 12 August 1966 4
DATE OF TIS: 24 August 1966 5
DATE OF PHOTOGRAPHY: 22 August 1965 6
DATE OF INTELLIGENCE REVIEW: 10 Sept 65 7
5. LOCATION: 21-23-10N, 106-37-56E, UTM XJ 696661, 1 NM NE of Kep Ha, 8
2 NM NW of Kep Ha Airfield. 9
6. DESCRIPTION: This active barracks area is brigade or regimental-plus 10
in size and contains approximately 100 buildings. Included are a headquar- 11
ters area, characteristic administration and support buildings, 2 fenced 12
probable communications areas, a heliport with graded field and hangars, 13
4 revetted warehouses, bunkers, and administration, barracks and support 14
buildings in groups of battalion-size complexes. Barracks capacity is 15
estimated to be approximately 4100. 16
7. SIGNIFICANCE: This site is adjacent to active training areas and 17
is supported by AAA and AW defenses. Its proximity to Kep Ha A/F, which 18
has recently been improved and made operational, lends credence to 19
collateral reports of airborne training in this general area. 20
8. TARGET ENVIRONMENT: This installation lies in a valley east of the 21
Red River Delta. The surrounding territory is heavily cultivated and 22
dotted with small villages. Route 13B runs east-west through this target. 23
9. DEFENSE ENVIRONMENT: 24
 - a. Five SAM sites have been identified within SA-2 missile range 25
(17.5NM) of the target, and 21 additional SAM sites have been identified 26
18-30 NM distant.
 - b. There is no identified AAA activity in the Kep Ha area. The 27
nearest active site is a 6-position unoccupied site in Dong Giao, 28
approximately 5 NM West. 29
 - c. Moderate HMG and small arms fire is anticipated from security 30
forces and troops from the barracks. 31
10. DAMAGE OBJECTIVE: Damage criterion is structural damage to barracks, 32
and support and storage structures with accompanying casualties to 33
personnel. Damage level is 30%. 34
11. EFFECT ON NVN: Damage of 30% would disrupt training activities and 35
temporarily reduce the combat capability of the military units associated 36
with this installation. 37

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Appendix A

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12. RECUPERABILITY: Near normal operations could be resumed at this installation within 36 hours if nearby cleared and level areas are utilized for field billeting. There is also sufficient civilian housing in the area to accommodate displaced troops and supplies. Replacement of destroyed equipment and supplies could be acquired from other military installations in the area within the same time frame.

13. COLLATERAL DAMAGE:

a. None

b. Population

Casualties*

Target Area		Adjacent Area		Target Area		Adjacent Area	
Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ
3200	0	800	50	192	0	8	0

*Casualties estimated under daylight alert conditions

14. RECOMMENDED WEAPONS AND SORTIES:

This is a large target complex comprised of 15 areas. Nine areas have been delineated for weapons application. Weapons and sorties have been computed for each area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target are also shown:

(1) In order to achieve a damage level of 30%, weapons/sorties required over target:

WEAPON	250# SNAKEYE	of	250# BOMB	or	500# BOMB	or	750# BOMB
Area A-1 (100x900)	28/2		79/7		41/5		24/4
Area D (250x350)	27/2		48/4		25/3		15/3
Area F (450x1100)	103/9		137/11		71/8		42/7
Area G-1 (500x500)	60/5		80/7		41/4		24/4
Area H (500x750)	82/7		107/9		55/6		32/5
Area J (300x600)	44/4		70/6		36/4		21/4
Area M (200x700)	50/4		98/8		98/11		98/16
Area P (500x550)	65/5		86/7		44/5		26/4
Area Q (150x300)	17/2		41/3		21/2		13/2
Totals	476/40		746/62		432/48		295/49

(2) Weapons/sorties operationally required to achieve "over target" requirements shown above:

580/49	910/76	527/59	363/43
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(3) In order to achieve a damage level of 70%, weapons/sorties required over target:

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WEAPON	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	750# BOMB	
Area A-1	95/8		266/22		138/15		81/13	1
Area D	91/8		162/14		85/9		51/8	2
Area F	347/29		462/38		240/27		142/24	3
Area G-1	202/17		270/23		138/15		81/14	4
Area H	276/23		360/30		185/21		108/18	5
Area J	148/12		236/20		121/13		71/12	6
Area M	169/14		330/27		330/37		330/55	7
Area P	220/18		290/24		148/17		88/15	8
Area Q	58/5		138/12		71/8		44/7	9
Totals	1606/134		2514/210		1456/162		996/166	10

(4) Weapons/sorties operationally required to achieve "over target" requirements shown above: 11
12

1959/164 3066/256 1776/198 1215/203 13

15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50% 14

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Tab AA1 to
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Appendix A

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TAB AB TO ANNEX C TO APPENDIX A

TARGET NO. 39.3

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NORTH VIETNAM

MU, GIA PASS ARMY BARRACKS AND SUPPLY POINT



AGE 000
RE 000000
DATE OF PHOTO 1968 09
SCALE 1:7,500
DATE OF EXPOSURE 1968 09 01
FILM 100 000 000

NO FOREIGN DISSEM

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A-C-AB-1

Tab AB to Annex C
to Appendix A

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 39.3 1
2. BE NUMBER: 617-0667 2
3. IDENTIFICATION: Mu Gia Pass Army Supply and Staging Point. 3
4
4. DATE OF INFORMATION: 11 February 1965 5
DATE OF TIS: 23 June 1965 6
DATE OF PHOTOGRAPHY: 11 February 1965 7
DATE OF INTELLIGENCE REVIEW: 11 February 1965 8
5. LOCATION: 17-40-15N 105-46-10E; UTM WE 815542. On the NE side of Route 12, through Mu Gia Pass from Laos into North Vietnam. 9
10
11
6. DESCRIPTION: Located near the small town of Bai Dinh (17 44N/105 45E) North Vietnam and approximately 13 NM NNE of Ban Pham Hop Airfield, Laos. This military complex contains 8 barracks-type buildings and one large administration/ barracks-type building. The total capacity is approximately 1,000, but permanent capacity is estimated at about 250. There are also 8 storage buildings and two support structures within the area. 12
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7. SIGNIFICANCE: Mu Gia Pass has been considered a primary point of entry into Laos from North Vietnam for supplies and troops destined to support the Viet Cong effort in South Vietnam since the Pathet Lao gained control of this area in 1961. The pattern of truck traffic, the construction of the military camp, and the efforts to improve the road emphasize the importance of this installation as a way-station and control point astride a vital road link. 20
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8. TARGET ENVIRONMENT: The border control point is located approximately one-half NM N of the geographic boundary separating North Vietnam and Laos. Sparsely populated areas on the Laotian side of the border area are located 6 to 10 NM W of the border. The surrounding terrain is mountainous with elevations ranging from 450 to 1100 meters. Vegetation cover is quite dense, and off-road movement difficult. 28
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9. DEFENSE ENVIRONMENT: At the S end of target area are two unoccupied 14.5/37mm AAA sites. There are also several probable AW positions in the area. Personnel trenches connect the main buildings with AW strongpoints and AAA sites. Three unoccupied 14.5/37mm sites and two unoccupied AW sites are approximately 4.5 NM N near Don Bai Dinh. There is no known radar in the area and no concentration of operational personnel. (DOI: 5 May 1965) 35
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10. DAMAGE OBJECTIVE: Destruction of this installation would deny the Viet Cong a vital supply and infiltration route into South Vietnam. 43
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11. EFFECT ON DRV: Destruction of this installation would disrupt the flow control of North Vietnam traffic into Laos, and hence hinder DRV support to the campaign in both Laos and South Vietnam. 46
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(Revised by 6th Note to Holders - 25 March 1966)

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12. RECUPERABILITY: Temporary accommodation to replace a 30% damage loss could be provided within 7 days. 1
2

13. COLLATERAL DAMAGE: Insignificant. 3

14. RECOMMENDED WEAPONS AND SORTIES: 4

This is a large target complex comprised of two areas. Weapons and sorties have been computed for each area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target is also shown. 5
6
7
8
9

(1) In order to achieve a damage level of 30% weapons/sorties required over target: 10
11

WEAPON	250# SNAKEYE	or	500# BOMB	or	750# BOMB	or	1000# BOMB	
Area A	32/3		40/5		24/4		21/7	12
Area B	37/3		31/3		18/3		16/5	13
Totals	69/6		71/8		42/7		37/12	14

(2) Weapons/sorties operationally required to achieve "over target" requirement shown above: 15
16

84/7	87/10	51/9	45/15	17
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(3) In order to achieve a damage level of 70% weapons/sorties required over target: 18
19

WEAPON	250# SNAKEYE	or	500# BOMB	or	750# BOMB	or	1000# BOMB	
Area A	108/9		135/15		81/14		71/24	20
Area B	125/10		105/12		61/10		54/18	21
Totals	233/19		240/27		142/24		125/42	22

(4) Weapons/sorties operationally required to achieve "over target" requirement shown above: 23
24

284/23	292/33	173/29	152/51	25
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15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%. 26

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Tab AB to
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Appendix A

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TAB ADa TO ANNEX C TO APPENDIX A

TARGET NO. 39.31



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A-C-ABa-1

Tab AYa to
Annex C to
Appendix A

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 39.31 1
2. B.E. NUMBER: 617-0085 2
3. IDENTIFICATION: Xom Trung Hoa Barracks and Ammunition Dpo NNW 3
4
4. DATE OF INFORMATION: 24 May 1965 DATE OF TIS: 29 Dec 1965 5
6
5. LOCATION: 18-43-22N 105-29-46E UTM WF 520709, one NM north of Xom Trung Hoa, approximately 13 NM WNW of Vinh on the Ca River. 7
8
9
6. DESCRIPTION: This active military site contains approxi- 10
mately 60 buildings including 18 barracks and barracks/support- 11
type structures, 16 storage buildings, 4 mess-halls and a 12
number of miscellaneous administration and support-type 13
buildings. Also included in the approximate total are 6 14
revetted probable ammunition storage buildings with an esti- 15
mated storage capacity of about 3700 M.T. The other storage 16
facilities have a capacity of about 95,000 sq. ft. Trenching 17
is evident and many AW sites, revetments, and signs of training 18
are in and around the installation. 19
7. SIGNIFICANCE: This installation is located between 20
Vinh and Vinh Son military complexes which serve the 324 In- 21
fantry Bde. The site has access to Routes 7 and 8, both of 22
which are main avenues for DRV support for operations in Laos. 23
8. TARGET ENVIRONMENT: These facilities are situated at 24
the base of several wooded hills which in turn are surrounded 25
by intensive cultivation. The six buildings groups are inter- 26
connected by a road network. 27
9. DEFENSE ENVIRONMENT: 28
a. There are 24 AAA sites in the general area of the 29
target (4, possibly 8, occupied/53 unoccupied 14.5mm/37mm 30
positions, 40 unoccupied 57mm/85mm positions and 4 possibly 31
occupied/8 unoccupied HMG positions). 32
b. This target falls within the capabilities of early 33
warning radar at Vinh. 34
10. DAMAGE OBJECTIVE: Personnel casualties and destruction 35
of stored materials. Damage criterion is structural damage 36
to storage buildings and accompanying damage to contents and 37
to personnel. Damage level is 30 percent. 38
11. EFFECT ON NVN Thirty per cent damage to this site would 39
temporarily disrupt infiltration support and in case of damage 40
to the ammunition storage, would probably have considerable 41
effect on supply to military units in the Vinh Military com- 42
plex. 43

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A-C-ABa-2

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12. RECUPERABILITY: With 30% destruction, the barracks portion of the target could probably resume operations within 24 hours since adjacent areas could be used for field billeting. Replacement of personnel and supplies could be accomplished within 24 hours since the target has road access to several other military installations in this general area. Replacement of stored supplies could be accomplished within 2 - 5 days, depending upon availability and replenishment priorities.

13. COLLATERAL DAMAGE: Insignificant.

14. RECOMMENDED WEAPONS AND SORTIES:

This is a large target complex comprised of six areas. Weapons and sorties have been computed for each area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target is also shown.

(1) In order to achieve a damage level of 30% weapons/sorties required over target:

Weapon:	250# <u>SNAKEYE</u>	or	250# <u>BOMB</u>	or	500# <u>BOMB</u>	or	750# <u>BOMB</u>
Area A	15/1		36/3		36/4		36/6
Area B	6/1		20/2		20/2		20/3
Area C	36/3		70/6		36/4		21/4
Area D	25/2		46/4		24/3		14/2
Area E	67/6		104/9		54/6		32/5
Area F	163/13		200/16		102/11		60/11
Totals:	312/26		476/40		272/30		183/31

(2) Weapons/sorties operationally required to achieve "over target" requirement shown above:

380/32	580/48	332/37	223/37
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(3) In order to achieve a damage level of 70% weapons/sorties required over target:

Weapon:	250# <u>SNAKEYE</u>	or	250# <u>BOMB</u>	or	500# <u>BOMB</u>	or	750# <u>BOMB</u>
Area A	51/4		122/10		122/14		122/20
Area B	21/2		68/6		68/7		68/11
Area C	122/10		236/20		122/14		71/12
Area D	85/7		155/13		81/9		47/8
Area E	226/19		351/29		182/20		108/18
Area F	550/46		674/56		344/38		203/34
Totals:	1055/88		1606/134		919/102		619/103

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(4) Weapons/sorties operationally required to
achieve "over target" requirements shown above:

1286/107 1958/163 1121/125 755/126

15. PROBABILITY OF ACHIEVING DAMAGE LEVEL: 50%

1
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A-C-ABa-4

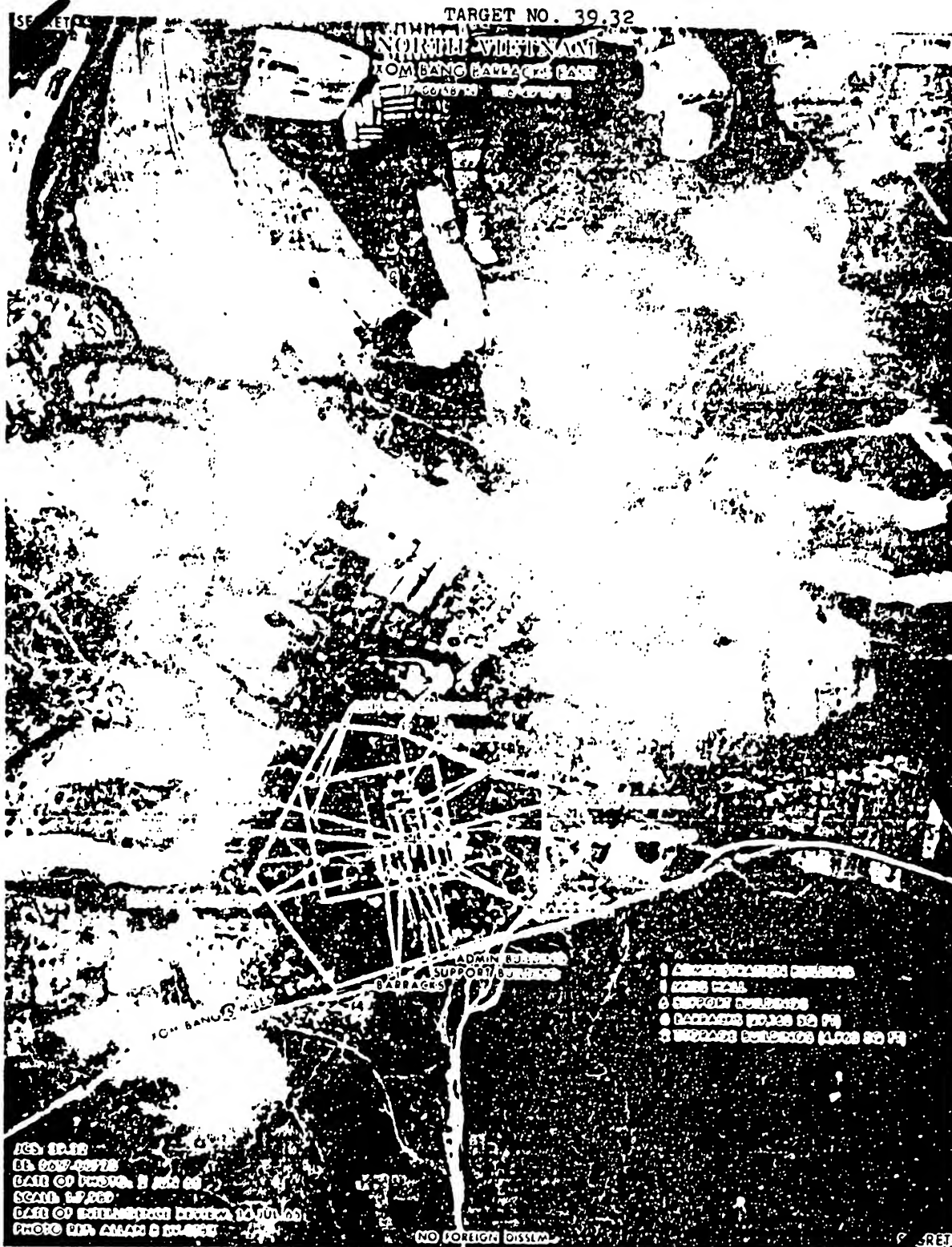
Tab ABa to
Annex C to
Appendix A

(Revised by 7th Note to Holders)

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TAB ABb TO ANNEX C TO APPENDIX A



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A-C-ABb-1

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Annex C to
Appendix A

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 39.32 1
2. BE NUMBER: 617-0723 2
3. IDENTIFICATION: Xom Bang Army Barracks E 3
4. DATE OF INFORMATION: 2 June 1965 DATE OF TIS: 16 July 1965 4
5. LOCATION: 17-06-58N 106-49-15E, UTM XD 936931, 5 nm E of Xom Bang, 1 nm SSE of Phong Tieu. 5
6
6. DESCRIPTION: This installation covers approximately 116,400 square yards and contains 6 barracks, 2 storage buildings, 1 administration building, a mess hall and several miscellaneous support structures. Personnel capacity of the barracks is approximately 850. There are numerous personnel trenches with firing bays and AW positions in the immediate and surrounding areas. 7
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7. SIGNIFICANCE: These facilities are serviced by two roads, one of which connects with Route 1, 3.7 nm to the NE. Xom Bang Ammunition Depot (BE 617-0222) is about 4 nm to the north-east. Military elements at this site could provide training and support to personnel infiltrating the RVN and Laos. 14
15
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17
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8. TARGET ENVIRONMENT: These facilities are located in an area of low wooded hills interspersed with cultivated fields and small civilian settlements. The Song Ngo Giang skirts the northern edge of the site and there are numerous roads and trails in the area. 19
20
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22
23
9. DEFENSE ENVIRONMENT: 24
 - a. There are 6 known inactive AAA sites in the general Xom Bang area (15 unoccupied 14.5mm/37mm positions and 14 unoccupied HMG positions). 25
26
27
 - b. This installation falls within the defenses of the DMZ Hq and is probably supported by elements generally associated with the DMZ complex, i.e. the 270th Independent Infantry Regiment. 28
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31
 - c. Radar at Vinh Linh, Lang Mo and Dong Hoi could provide EW for this installation. 32
33
10. DAMAGE OBJECTIVE: Personnel casualties and destruction of facilities. Damage criterion is structural damage to barracks and support buildings with accompanying casualties to personnel and equipment. Damage level is 30 percent. 34
35
36
37
11. EFFECT ON DRV: Damage to this installation would temporarily disrupt probable training activities and possibly delay for a short time infiltration movements which might depend upon this installation for support. 38
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A-C-ABb-2

Tab ABb to
Annex C to
Appendix A

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12. RECOVERABILITY: With 30% destruction, near normal operations could probably resume within 24 hours since there is ample room for field billeting. Replacement of personnel and material could probably be achieved within 36 hours. 1
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3
4

13. COLLATERAL DAMAGE: Insignificant. 5

14. RECOMMENDED WEAPONS AND SORTIES: 6

a. In order to achieve the desired damage level, weapons/sorties required over target: 7
8

Weapon	250# <u>SNAKEYE</u>	or	250# <u>BOMB</u>	or	500# <u>BOMB</u>	or	750# <u>BOMB</u>	
	103/9		128/11		66/7		39/7	9

b. Weapons/sorties operationally required to achieve "over target" requirements shown above: 10
11

126/11	156/13	80/9	48/8	12
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c. In order to achieve desired damage level of 70%, weapons/sorties required over target: 13
14

Weapon	250# <u>SNAKEYE</u>	or	250# <u>BOMB</u>	or	500# <u>BOMB</u>	or	750# <u>BOMB</u>	
	348/29		433/36		233/25		132/22	15

d. Weapons/sorties operationally required to achieve "over target" requirements shown above: 16
17

424/35	528/44	272/30	161/27	18
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15. PROBABILITY OF ACHIEVING DAMAGE LEVEL: 50%. 19

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A-C-ABb-3

Tab ABb to
Annex C to
Appendix A

(Revised by 7th Note to Holders)

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TAB ABc TO ANNEX C TO APPENDIX A

TARGET NO. 39.33



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(Revised by 11th N/H)

A-C-ABc-1

TAB ABc TO ANNEX C
to Appendix A

ICS 39.33

REF: 0016 00933

DATE OF PHOTO: 20 JULY 1965

SCALE: 1:7,412

DATE OF INTELLIGENCE REVIEW: 20 SEPTEMBER 1966

PHOTO REF: TOM 4 RV 1730

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 39.33 1
2. BE NUMBER: 616-0953 2
3. IDENTIFICATION: Trai Thon Army Barracks 3
4. DATE OF INFORMATION: 20 September 1966 4
DATE OF TIS: 18 October 1966 5
DATE OF PHOTOGRAPHY: 20 July 1965 6
DATE OF INTELLIGENCE REVIEW: 20 September 1966 7
5. LOCATION: 21-20-22N 106-09-00E, UTM XJ 196600, one NM NNE of Trai Thon and 4.6 NM NE of Bac Giang. 8
9
6. DESCRIPTION: This barracks area contains twelve 2-story barracks buildings (9 - 182' x 34'; 1 - 115' x 34'; 1 - 170' x 34'; and 1 - 105' x 34'), 1 large administration building (136' x 65') probably used as an auditorium, 1 large twin building mess hall (14,500 ft. sq.), 22 support buildings (approximately 45,000 ft. sq.), and 1 water tower. The barracks capacity is estimated at 2000 troops; however, this could be a military school, in which case a part of the floor space would be allotted to classrooms. 10
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7. SIGNIFICANCE: This installation is one of a number of large military installations in the general area of Bac Giang. Collateral reports indicate an Army engineering school is in the Bac Giang area and OB holds an AAA Regiment in this vicinity; however, defenses related to this site appear limited to trenching and probable AW positions. 17
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8. TARGET ENVIRONMENT: Target is on a broad flat plain cultivated to wetland rice. Many small civilian settlements are scattered throughout the surrounding vicinity. 22
23
24
9. DEFENSE ENVIRONMENT: 25
 - a. Sixteen SAM sites have been identified within SA-2 missile range (17.5 NM) of the target, and 25 additional SAM sites have been identified 18-30 NM distant. 26
27
28
 - b. No AAA defense activity has been identified in the immediate vicinity of the target; however, there are 13 active sites (38 occupied 57mm/85mm revetments and 33 occupied 37mm revetments) and 9 inactive sites in the Bac Giang area, and 8 active sites (39 occupied 57mm/85mm revetments and 12 occupied 37mm revetments) and 4 inactive sites in the Dinh Xuyen area. (DOI: 21 July 1965 - 1 July 1966) 29
30
31
32
33
34
 - c. Intense HMG and small arms fire is anticipated. 35
10. DAMAGE OBJECTIVE: Damage criterion is structural damage to barracks and support buildings with accompanying personnel casualties. Damage level is 30%. 36
37
11. EFFECT ON NVN: Damage to this installation would not significantly affect the overall NVN posture as related to support for the Viet Cong and PL; however, possible training of engineers would be temporarily interrupted. 38
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A-C-ABc-2

Tab ABc to
Annex C to
Appendix A

(Revised by 11th Note to Holders)

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12. RECUPERABILITY: With 30% destruction achieved, it would probably take only 24 hours to provide shelter for displaced troops, either under canvas or in nearby civilian housing. Replacement of personnel and equipment could probably be acquired within 3 to 4 days.

13. COLLATERAL DAMAGE:

a. Insignificant

b. Population

Casualties*

Target Area		Adjacent Area		Target Area		Adjacent Area	
Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ
1000	0	50	50	60	0	1	1

*Casualties estimated under daylight alert conditions.

14. RECOMMENDED WEAPONS AND SORTIES:

a. In order to achieve the damage level of 30%, weapons/sorties required over target:

WEAPON	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	750# BOMB
Area A (750x1000)	245/21		290/25		172/20		118/20

b. Weapons/sorties operationally required to achieve "over target" requirement shown above:

299/25	354/30	210/24	144/24
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c. In order to achieve the damage level of 70%, weapons/sorties required over target:

WEAPON	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	750# BOMB
Area A	830/70		980/82		580/65		400/67

d. Weapons/sorties operationally required to achieve "over target" requirement shown above:

1012/85	1195/100	707/79	488/82
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15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%

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A-C-ABc-3

Tab ABc to
Annex C to
Appendix A

(Revised by 11th Note to Holders)

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TAB ABd TO ANNEX C TO APPENDIX A

TARGET NO. 39.34



~~TOP SECRET~~
(Revised 31 August 1965)

A-C-ABd-1

TAB ABd to
Annex C to
Appendix A

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 39.34 1
2. BE NUMBER: 617-0094 2
3. IDENTIFICATION: Ha Tinh Army Bks and Supply Dpo 3
4. DATE OF INFORMATION: 15 May 1965 DATE OF TIS: 4
9 August 1965 5
5. LOCATION: 18-19-55N 105-54-40E, UTM WF 956269, 0.7 NM 6
SSW of Ha Tinh. 7
6. DESCRIPTION: This installation is a secured area on 8
Route 1. The area contains 3 administration buildings, 9
barracks, 15 probable storage/warehouse buildings, 1 mess hall 10
and at least 3 utility/support buildings. A second enclosed 11
possibly military area is located approximately 1/2 NM to the 12
east. 13
7. SIGNIFICANCE: Possible location of elements of an 14
Engineer Regiment. The area would be used to house troops 15
and provide storage for equipment and supplies used to main- 16
tain Route 1. 17
8. TARGET ENVIRONMENT: This area is located in the coastal 18
delta 0.7 NM SSW of Ha Tinh and adjacent to Route 1. The 19
area is heavily cultivated and there are many individual farm 20
houses among the rice fields. 21
9. DEFENSE ENVIRONMENT: 22
 - a. The only known AAA in the immediate vicinity is an 23
unoccupied AW position approximately 1/2 NM to the east. 24
Within the Ha Tinh area, however, there is one unoccupied 25
57/85mm site with 6 positions, 20 14.5/37mm sites with 86 26
positions, 24 of which are occupied. 27
 - b. There are four EW radars in the vicinity. 28
 - c. Small arms fire can be expected from troops in the 29
area. 30
10. DAMAGE OBJECTIVE: Structural damage to buildings with 31
resulting loss of personnel and equipment. Damage level is 32
30%. 33
11. EFFECT ON DRV: Reduce capability to repair supply 34
routes with resulting delay in delivery of supplies. 35
12. RECUPERABILITY: Barracks could possibly be operational 36
at a reduced level in 24 hours. Replacement of casualties 37
and destroyed equipment would take 3 to 15 days, depending 38
on priorities. 39
13. COLLATERAL DAMAGE: Insignificant. 40
14. RECOMMENDED WEAPONS AND SORTIES: 41
 - a. In order to achieve the damage level of 30%, weapons/ 42
sorties required over target: 43

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Weapon	250# <u>SNAKEYE</u>	or	250# <u>BOMB</u>	or	500# <u>BOMB</u>	or	750# <u>BOMB</u>	
	148/12		187/16		96/11		56/9	1

b. Weapons/sorties operationally required to achieve "over target" requirements shown above: 2
3

180/15	228/19	117/13	68/11	4
--------	--------	--------	-------	---

c. In order to achieve the damage level of 70%, weapons/sorties required over target: 5
6

Weapon	250# <u>SNAKEYE</u>	or	250# <u>BOMB</u>	or	500# <u>BOMB</u>	or	750# <u>BOMB</u>	
	499/42		630/53		324/36		189/32	

d. Weapons/sorties operationally required to achieve "over target" requirements shown above: 8
9

609/51	768/64	395/44	230/38	10
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15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50% 11

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Appendix A

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TAB AHA TO ANNEX C TO APPENDIX A

TARGET NO. 39.35



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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 39.35 1
2. BE NUMBER: 617-1229 2
3. IDENTIFICATION: Co Dinh Army Barracks NW 3
4. DATE OF INFORMATION: 29 July 1965 DATE OF TIC: 4
10 Dec 1965 5
5. LOCATION: 19-45-58N 105-35-09E, UTM WG 612864, 3.4 NM 6
W of Co Dinh, approximately 12 NM W of Thanh Hoa. 7
6. DESCRIPTION: Target area contains a total of 41 build- 8
ings including those under construction as well as some scars 9
of dismantled structures. Main target is on E side of natural 10
earth road, improved from a cart trail, leading through a 11
series of small villages. It comprises a battalion-type area 12
of 10 probable barracks, 6 support/storage-type buildings, 13
a mess hall and an administrative building. Adjoining is 14
another barracks and support area still under construction 15
consisting of 6 probable barracks completed, and 3 support 16
buildings (2 under construction). There are 2 barracks/ 17
administrative-type buildings under construction and a few 18
small sheds. West of the road are additional storage/ 19
support-type buildings and a training area. The main 20
trenches in the area presently contain water. 21
7. SIGNIFICANCE: Area is in the zone of responsibility of 22
the 330th Infantry Brigade which is active in training infil- 23
trators for both V/C and P/L support. An artillery battalion 24
has been reported in this vicinity. 25
8. TARGET ENVIRONMENT: Target is situated in low deltaic 26
marshland of the Song Ma, consisting primarily of paddy 27
fields. NW/SE trending foothills rise to the S and W with a 28
1750 ft elevation approximately 1.5 NM SSE. 29
9. DEFENSE ENVIRONMENT: In the vicinity of Co Dinh is an 30
inactive 14.5/37mm AAA site containing 3 unoccupied positions. 31
In the Thanh Hoa area defenses consist of 15 active 14.5/37mm 32
sites with a total of 44 occupied positions. There are 2 33
active 57/85mm sites with 12 occupied positions. Target is 34
within the capabilities of EW radar at My Duc, 22 NM NE. 35
Small arms and A/W ground fire can be anticipated from troops 36
in the area. 37
10. DAMAGE OBJECTIVE: Casualties to personnel and damage 38
to military supplies and equipment. Damage level is 30%. 39
11. EFFECT ON NVN: Reduction of capability to train and 40
support infiltration efforts. 41
12. RECUPERABILITY: Functioning of troops in this area 42
could be resumed in 12 hours by bivouacking under canvas or 43
of quartering in nearby village. Barracks repair or recon- 44
struction might not be undertaken until the dry season. 45
13. COLLATERAL DAMAGE: Insignificant. 46

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14. RECOMMENDED WEAPONS AND SORTIES:

1

a. In order to achieve the damage level of 30%, weapons/
sorties required over target:

2

3

Weapon	250# <u>SNAKEYE</u>	or	250# <u>BOMB</u>	or	500# <u>BOMB</u>	or	750# <u>BOMB</u>
	113/9		146/12		75/8		44/7

4

b. Weapons/sorties operationally required to achieve
"over target" requirements shown above:

5

6

138/12	178/15	91/10	54/9
--------	--------	-------	------

7

c. In order to achieve the damage level of 70%, weapons/
sorties required over target:

8

9

Weapon	250# <u>SNAKEYE</u>	or	250# <u>BOMB</u>	or	500# <u>BOMB</u>	or	750# <u>BOMB</u>
	381/32		492/41		253/28		149/25

10

d. Weapons/sorties operationally required to achieve
"over target" requirements shown above:

11

12

465/39	600/50	309/34	181/30
--------	--------	--------	--------

13

15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%.

14

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TAB ABC TO ANNEX C TO APPENDIX A

TARGET NO. 39.36



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Annex C to
Appendix A

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 39.36 1
2. BE NUMBER: 617-0236 2
3. IDENTIFICATION: Vinh Army Barracks NW 3
4. DATE OF INFORMATION: 25 August 1965 DATE OF TIS: 14 Oct 1965 4
5
5. LOCATION: 18-41-00N 105-39-48E, UTM WF 699658, approximately 1 NM NW of Vinh, immediately west of Vinh Railroad Classification Yard NW (BE 617-0027). 6
7
8
6. DESCRIPTION: This large military installation consists of three areas containing approximately 179 buildings. Area 1 contains 7 administration buildings, 28 barracks, 20 storage structures, 3 mess halls and approximately 29 support buildings. Area 2 consists of 6 administration buildings, 12 storage buildings, 14 barracks, 2 mess halls, and approximately 29 support structures. Area 3, which is to the NW and slightly removed from areas 1 and 2, contains 4 administration buildings, 6 barracks, 6 storage buildings, 1 mess hall and approximately 12 support structures. If fully occupied, these facilities could house around 4,000 troops. 9
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7. SIGNIFICANCE: This installation may be associated with the local defenses and logistic activities and probably supports MR IV military training and operations, including support of the Viet Cong. All major routes and radio communications to the south channel through Vinh. The rail line from the north to Vinh is immediately to the east of this barracks area. 20
21
22
23
24
25
26
8. TARGET ENVIRONMENT: Target is situated in a nearby flat plain planted to wetland rice. A number of civilian settlements are located in the vicinity of the targeted areas. 27
28
29
9. DEFENSE ENVIRONMENT: 30
 - a. Within the installation boundaries there is one inactive 8-position AAA site with associated AW revetments. The general Vinh area AAA defense consists of 102 identified AAA sites, 32 of which are estimated active as follows: 15 active 57/85mm size sites (100 occupied positions) and 17 active 14.5/37mm size sites (67 occupied positions). In addition, there are 24 identified HMG (12.7mm or less caliber) sites with 45 positions occupied. 31
32
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34
35
36
37
38
 - b. Confirmed radars in the Vinh area include 6 AAA fire control-type, 3 early warning, and 1 height finder-type. 39
40
41
 - c. At least one and possibly 2 Independent Infantry Regiments are reportedly in the general area of Vinh. An AAA battalion and APSF forces are also reported to be located in and around the Vinh complex. 42
43
44
45
10. DAMAGE OBJECTIVE: Personnel casualties. Damage criterion is structural damage to barracks and administration buildings with accompanying casualties to personnel. Damage level is 30%. 46
47
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11. EFFECT ON NVN: Reduction of capability to supply close military support to VC/PL activities and disruption of communications and logistic activities. 1
2
3

12. RECUPERABILITY: With a destruction level of 30%, it should take around 48 hours to resume barracks-type operations on a limited scale. Repair of permanent structures would require approximately 3 weeks. Replacement personnel could be in the Vinh area within 72 hours. 4
5
6
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8

13. COLLATERAL DAMAGE: Moderate damage to surrounding area. 9

14. RECOMMENDED WEAPONS AND SORTIES: 10

a. The target consists of four areas. Weapons and sorties have been computed for each area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required to achieve "over target" requirements are also shown: 11
12
13
14
15

(1) In order to achieve a damage level of 30%, weapons/sorties required over target: 16
17

Weapon	250# <u>SNAKEYE</u>	or	250# <u>BOMB</u>	or	500# <u>BOMB</u>	or	750# <u>BOMB</u>	
Area A	220/19		253/21		130/15		76/13	18
Area B	178/15		211/18		108/12		64/11	19
Area C	192/16		229/19		118/13		69/12	20
Area D	97/8		121/10		62/7		37/6	21
Totals	687/58		814/68		418/47		246/42	22

(2) Weapons/sorties operationally required to achieve "over target" requirements shown above: 23
24

838/70 993/83 510/57 300/50 25

(3) In order to achieve a damage level of 70%, weapons/sorties required over target: 26
27

Weapon	250# <u>SNAKEYE</u>	or	250# <u>BOMB</u>	or	500# <u>BOMB</u>	or	750# <u>BOMB</u>	
Area A	741/62		853/71		438/49		256/43	28
Area B	600/50		711/59		364/41		216/36	29
Area C	647/54		772/65		398/44		233/39	30
Area D	327/27		408/34		209/23		125/21	31
Totals	2315/193		2744/229		1409/157		830/139	32

(4) Weapons/sorties operationally required to achieve "over target" requirements shown above: 33
34

2823/235 3346/279 1718/191 1012/169 35

15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%. 36

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NORTH VIETNAM

YEN ARMY BARRACKS FIRE

11 21 22 N 103 37 41 E



1. ADMINISTRATIVE BUILDING
2. BARRACKS SUPPORT AREA
3. BARRACKS VEHICLE SHED
4. BARRACKS SUPPORT AREA
5. BARRACKS SUPPORT AREA
6. BARRACKS SUPPORT AREA
7. BARRACKS SUPPORT AREA
8. BARRACKS SUPPORT AREA
9. BARRACKS SUPPORT AREA
10. BARRACKS SUPPORT AREA
11. BARRACKS SUPPORT AREA
12. BARRACKS SUPPORT AREA
13. BARRACKS SUPPORT AREA
14. BARRACKS SUPPORT AREA
15. BARRACKS SUPPORT AREA
16. BARRACKS SUPPORT AREA
17. BARRACKS SUPPORT AREA
18. BARRACKS SUPPORT AREA
19. BARRACKS SUPPORT AREA
20. BARRACKS SUPPORT AREA

11 21 22 N 103 37 41 E
DATE OF PHOTO: 3 MARCH 1968
SCALE: 1:11,772
DATE OF INTELLIGENCE REVIEW: 1 APR 1968
PHOTO REFERENCE: 55 514 1 342

NO FOREIGN DISSEM

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 2-1-27

2. PR NUMBER: 2-1-030

3. IDENTIFICATION: Vinh Yen Army Barracks NNE

4. DATE OF INFORMATION: 4 April 1969
DATE OF INFO: 11 May 1969
DATE OF PHOTOGRAPHY: 2 March 1969
DATE OF INTELLIGENCE REVIEW: 7 April 1969

5. LOCATION: 21-11-20N 105-17-04E, located approximately 3.5 miles from Vinh Yen.

6. DESCRIPTION: This installation is a component of the Vinh Yen Military Complex and is comprised of one large and 2 small barracks, a large water meter pool. There are approximately 60 major buildings within the area including 22 barracks, 24 vehicle sheds, 24 administrative buildings and mess halls, and 25 other structures. A number of probable quarters or civilian-type dwellings are also present. Trenching and vehicle revetments are evident throughout the area. An extensive training area is located to the E of the main target. Troop capacity is estimated to be about 3,000.

7. UNIT: 1st Tank Regiment, the only such regiment in the area, is responsible for the Vinh Yen area. Photography has shown 1st Tank in the vicinity of Vinh Yen.

8. TARGET ENVIRONMENT: The surrounding terrain is rolling, hilly, and alternately scrub-covered and cultivated. There are many rivers and streams throughout the area.

9. DEFENSE ENVIRONMENT:

a. The target is within the SAM envelope.

b. AAA activity has been identified within 3 NM of the target.

c. HMG and small arms fire is anticipated.

10. DAMAGE OBJECTIVE: Personnel casualties. Damage criterion is structural damage to barracks, support and vehicle sheds and accompanying personnel losses. Damage level is 30%.

11. EFFECT ON NVN: Loss of this installation would affect training and operational capabilities of military elements in the area and may result in destruction of armored vehicles and trucks.

12. RECUPERABILITY: Assuming 30% destruction, it is probable that vehicle maintenance and training would be disrupted from 8 to 72 hours. Displaced troops could be housed in civilian areas or billeted in the field. Replacement of destroyed equipment and supplies would require 3 to 5 days if available in the Hanoi area, 7 to 8 days if acquired from Communist China.

~~SECRET~~ NO FOREIGN DISSEM EXCLUDED FROM AUTOMATIC DOWNGRADING

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13. COLLATERAL DAMAGE:

a. Insignificant

b.

Population				Casualties*			
Target Area		Adjacent Area		Target Area		Adjacent Area	
Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ
90	20	10	100	5	1	0	1

*Casualties estimated under daylight alert conditions.

14. RECOMMENDED WEAPONS AND SORTIES:

This target complex is comprised of four areas. Weapons and sorties have been computed for each area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target are also shown:

(1) In order to achieve a damage level of 30%, weapons/sorties required over target:

WEAPON	500#	or	500#	or	500#	or	750#
	SNAKEYE		SNAKEYE		BOMB		BOMB
Area A (1000000)	10/1		10/1		10/2		11/2
Area B (1000000)	170/15		96/11		110/12		59/10
Area C (1000000)	110/10		65/7		76/8		40/7
Area D (1000000)	13/1		9/1		16/2		9/2
Total	305/24		179/10		222/24		119/21

(2) Weapons/sorties operationally required to achieve "over target" requirement shown above:

305/24	215/24	265/29	143/25
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(3) In order to achieve a damage level of 70%, weapons/sorties required over target:

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WEAPON	250# SNAKEYE	or	500# SNAKEYE	or	500# BOMB	or	750 BOMB	
Area A	61/5		34/4		65/7		35/6	1 2
Area B	538/11		322/36		371/41		197/33	3 4
Area C	402/34		220/24		255/28		135/23	5 6
Area D	44/4		24/3		55/6		29/5	7
Totals	1095/92		600/67		746/82		396/67	8 9
(4) Weapons/sorties operationally required to achieve "per target" requirement shown above:								10 11
	1314/110		720/80		895/98		475/80	
15. <u>PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL:</u> 50%.								

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TAB ABh TO ANNEX C TO APPENDIX A

TARGET NO. 39, 38

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NORTH VIETNAM



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(Revised by 11th N/H)

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to Annex C

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 39.38 1
2. BE NUMBER: 616-0372 2
3. IDENTIFICATION: Phu Tho Army Barracks NW 3
4. DATE OF INFORMATION: 21 September 1966 4
DATE OF TIS: 3 October 1966 5
DATE OF PHOTOGRAPHY: 23 July 1966 6
DATE OF INTELLIGENCE REVIEW: 8 September 1966 7
5. LOCATION: 21-27-00N 105-11-44E, UTM WJ 207718, 3 NM NNW of Phu Tho. 8
6. DESCRIPTION: This installation has been in the process of dismantling since November 1965 and now contains only 2 double-bay warehouses and 3 storage buildings. There appears to be one probable revetted building in the training area. All barracks buildings have been dismantled. 9
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7. SIGNIFICANCE: This target area no longer appears to be militarily significant and will possibly be completely dismantled or abandoned. 13
14
8. TARGET ENVIRONMENT: This installation is situated on low scrub-covered hills surrounded by cultivated fields and small farms. 15
16
9. DEFENSE ENVIRONMENT: 17
 - a. Ten SAM sites have been identified within SA-2 missile range (17.5 NM) of this target and 8 additional sites are 18-30 NM distant. 18
19
 - b. No AAA defense activity has been identified in the area of this target, and the closest AAA defenses are 4 inactive sites approximately 3 NM due east in the Ngoc Thap area. 20
21
22
 - c. Sparse HMG and small arms fire is anticipated. 23
10. DAMAGE OBJECTIVE: Damage criterion is structural damage to barracks, storage and support structures with accompanying casualties to personnel. Damage level is 30%. 24
25
26
11. EFFECT ON NVN: Damage to this installation would temporarily disrupt remaining training activities but would have little appreciable effect on the overall NVN defense position. 27
28
29
12. RECUPERABILITY: Assuming 30% destruction, near normal operations could be resumed within 48 hours if troops are billeted in tents. Destroyed supplies and equipment could be replaced within 5 to 7 days, depending upon priorities. 30
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Appendix A

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13. COLLATERAL DAMAGE:

a. None

b. Population

Casualties*

Target Area Adjacent Area Target Area Adjacent Area

Mil Civ Mil Civ Mil Civ Mil Civ

20 0 5 15 1 0 0 0

*Casualties estimated under daylight alert conditions.

14. RECOMMENDED WEAPONS AND SORTIES:

This installation is comprised of 4 areas. One area has been delineated for weapons application. Weapons and sorties have been computed for this area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target are also shown:

(1) In order to achieve a damage level of 30%, weapons/sorties required over targets:

WEAPON	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	750# BOMB
Area B (250x600)	37/4		67/6		34/4		20/4

(2) Weapons/sorties operationally required to achieve "over targets" requirements shown above:

45/4	82/7	41/5	24/4
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(3) In order to achieve a damage level of 70%, weapons/sorties required over target:

WEAPON	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	750# BOMB
Area B	125/11		227/19		115/13		68/12

(4) Weapons/sorties operationally required to achieve "over target" requirements shown above:

152/13	277/24	140/16	83/14
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15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: .50%

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A-C-ABh-3

Tab ABh to
Annex C to
Appendix A

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TAB AB1 TO ANNEX C TO APPENDIX A

TARGET NO. 39.39



TOP SECRET

(Revised by 6th N/H)

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Tab ABi to Annex C
to Appendix A

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 39.39 1
2. BE NUMBER: 617-0123 2
3. IDENTIFICATION: Phu Van Army Barracks SSE 3
4. DATE OF INFORMATION: 3 September 1965 4
DATE OF TIS: 20 December 1965 5
DATE OF PHOTOGRAPHY: 3 August 1965 6
DATE OF INTELLIGENCE REVIEW: 3 September 1965 7
5. LOCATION: 18-49-00N 105-18-27E, UTM WF 327808, approximately 1 NM S of Phu Van, 4.5 NM S of Vinh Son. 8
9
6. DESCRIPTION: This military garrison consists of a barracks area and an administrative area. The barracks area is fenced and contains approximately 12 barracks, 1 mess hall, 9 miscellaneous support buildings and a parade ground. This area has two gates, and numerous weapons emplacements and trenches are noted throughout the surrounding area. The administrative area contains 3 administration buildings, 6 barracks, 1 mess hall and approximately 5 miscellaneous support structures. The capacity of this installation is estimated to be around 2,000. 10
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7. SIGNIFICANCE: This garrison is part of the large military complex in the Vinh Son area serving the 328th Infantry Brigade and located south of Route 7 between Routes 7 and 8, both of which are main avenues for support to operations in Laos. 20
21
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23
24
8. TARGET ENVIRONMENT: This installation is located in the low intensively cultivated riceland on the eastern bank of the Song Ca. Civilian settlements and farms about the administration area of this target and a large training area surrounds the barracks area. This facility has access to both good roads and to the Song Ca. 25
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9. DEFENSE ENVIRONMENT: 31
 - a. There is one inactive AW or light AAA site (6 positions) in the training area to the northeast of the barracks complex. The over-all Vinh Son-Phu Van AAA defenses consist of the following: 8 active sites (17 occupied 14.5mm/37mm positions and 10 occupied/20 unoccupied 57mm/85mm positions) and 22 inactive sites (65 unoccupied 14.5mm/37mm positions and 48 unoccupied 57mm/85mm positions) and 20 unoccupied HMG positions. (DOI: 10 - 22 August 1965.) 32
33
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40
 - b. Heavy AW and ground fire from the troops in the area would be anticipated. 41
42
10. DAMAGE OBJECTIVE: Damage criterion is structural damage to buildings and accompanying personnel casualties. Damage level is 30%. 43
44
45
11. EFFECT ON DRV: 30% damage to this target would probably temporarily interrupt training and support to infiltration activities; however, this interruption would not be critical. 46
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12. RECUPPERABILITY: Theoretically, this installation could be brought back to near normal operations within 3 days; however, it is probable that troops would be dispersed to nearby civilian settlements. This conclusion is based on the fact that no apparent attempts have been made to restore nearby targets that have suffered bomb damage.

13. COLLATERAL DAMAGE: Light damage to surrounding area.

14. RECOMMENDED WEAPONS AND SORTIES:

The target area consists of two areas. Weapons and sorties have been computed for each area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required to achieve "over target" requirements are also shown:

(1) In order to achieve a damage level of 30%, weapons/sorties required over target:

WEAPON:	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	750# BOMB	
Area A	88/7		108/9		56/6		33/5	16
Area B	90/8		115/10		59/7		35/6	17
Totals	178/15		223/19		115/13		68/11	18

(2) Weapons/sorties operationally required to achieve "over target" requirements shown above:

217/18	272/23	140/16	83/14	21
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(3) In order to achieve a damage level of 70%, weapons/sorties required over target:

WEAPON	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	750# BOMB	
Area A	298/25		365/30		190/21		112/19	24
Area B	305/25		389/33		200/22		119/20	25
Totals	603/50		754/63		390/43		231/39	26

(4) Weapons/sorties operationally required to achieve "over target" requirements shown above:

735/61	920/77	476/53	252/47	29
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15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%

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2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 2679, 2680, 2681, 26

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NORTH ATLANTIC

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AT 64-1000

DATE OF PRESENTATION

SCALE 14c

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 39.41 1
2. BE NUMBER: 616-0315 2
3. IDENTIFICATION: Ngoc Thi Army Barracks and Supply Depot 3
4. DATE OF INFORMATION: 12 August 1966 4
DATE OF TIS: 7 September 1966 5
DATE OF PHOTOGRAPHY: 21 July 1965 6
DATE OF INTELLIGENCE REVIEW: 19 August 1965 7
5. LOCATION: 21-54-42N 104-54-09E, UTM VK 903229, 1 NM S of 8
Ngoc Thi, 13 NM NNE of Yen Bai, 16 NM W of Tuyen Quang. 9
6. DESCRIPTION: This installation is located on the southern side of 10
the Song Chay and has immediate access to the Ha Noi-Lao Cai road. There 11
are two barracks areas with a total of approximately 18 barracks, 16 12
miscellaneous support structures and 2 administration buildings. The 13
larger barracks area is secured by a wall, a control building and 2 guard 14
towers. The storage areas contain approximately 12 storage buildings and 15
5 support-type structures. AW positions and trenching are in evidence. 16
This site could accommodate up to 1,550 troops and has a storage capacity 17
of around 35,000 square feet. 18
7. SIGNIFICANCE: No specific military unit can be identified with 19
this installation; however, it appears to be active and is of moderate 20
significance because of capacity. 21
8. TARGET ENVIRONMENT: This installation is on a river and is 22
encircled by roads. The surrounding terrain appears level and cultivated 23
and civilian settlements are immediately adjacent to the target on three 24
sides. 25
9. DEFENSE ENVIRONMENT: 26
 - a. No SAM sites have been identified within SA-2 missile range 27
(17.5 NM) of this target nor have any sites been identified within a 28
30 NM radius. 29
 - b. No AAA defense activity has been identified in the area of this 30
target, the closest being approximately 12 NM SW in the Yen Bai area. 31
 - c. Intense machine gun/small arms fire from the barracks area 32
would be anticipated by low flying aircraft. 33
10. DAMAGE OBJECTIVE: Destruction of barracks and storage 34
buildings with accompanying casualties to personnel and equipment. Damage 35
level is 30 per cent. 36

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Tab ABk to
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(Revised by 11th Note to Holders)

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11. EFFECT ON NVN: Damage to this barracks installation would have no appreciable effect upon the overall NVN defense position but would further demonstrate the vulnerability of identifiable military garrisons. 1
2
3

12. RECUPERABILITY: Limited operations could be resumed within 24 hours if displaced troops are dispersed to nearby civilian housing or accommodated in tents. Repair of barracks would require at least one week. Supplies could be replaced within 48 hours or less, depending upon priorities. 4
5
6
7

13. COLLATERAL DAMAGE: 8

a. Insignificant 9

b. Population Casualties* 10

Target Area Adjacent Area Target Area Adjacent Area 11

Mil Civ Mil Civ Mil Civ Mil Civ 12

1500 0 50 150 90 0 1 2 13

*Casualties estimated under daylight alert conditions. 14

14. RECOMMENDED WEAPONS AND SORTIES: 15

a. The target consists of four areas. Weapons and sorties have been computed for each area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required to achieve "over target" requirements are also shown: 16
17
18
19

(1) In order to achieve a damage level of 30%, weapons/sorties required over target: 20
21

WEAPON	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	750# BOMB	
Area A (350x750)	59/5		89/8		46/5		27/5	22
Area B (500x550)	65/5		86/7		44/5		26/4	23
Area C (150x300)	17/2		41/3		21/2		13/2	24
Area D (300x500)	40/3		64/5		33/4		20/3	25
Totals	181/15		280/23		144/16		86/14	26

(2) Weapons/sorties operationally required to achieve "over target" requirements shown above: 27
28

221/19	341/29	176/20	105/18	29
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Appendix A

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(3) In order to achieve a damage level of 70%, weapons/sorties required over target:

WEAPON	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	750# BOMB	
Area A	200/17		300/25		156/18		92/15	3
Area B	217/19		290/25		149/17		88/15	4
Area C	58/5		139/12		71/8		44/7	5
Area D	136/12		217/19		112/12		68/11	6
Totals	611/53		946/81		488/54		292/48	7

(4) Weapons/sorties operationally required to achieve "over target" requirements shown above:

745/63	1154/97	595/66	356/60	10
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15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50% 11

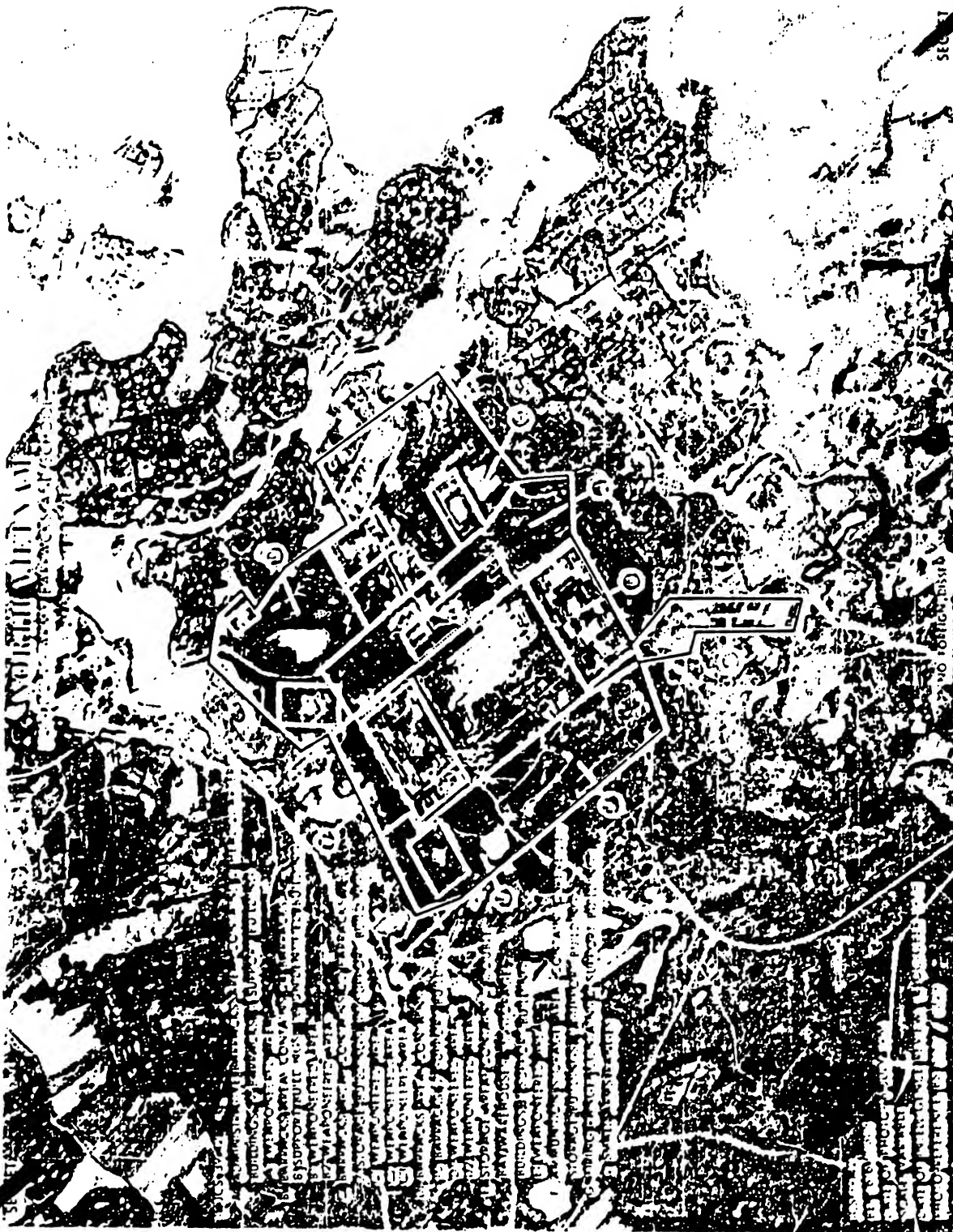
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A-C-AE-4

Tab AEk to
Annex C to
Appendix A

(Revised by 11th Note to Holders)

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NO POSITION DATA

1. The photograph was taken on 12/1/67 at 10:00 AM. The aircraft was flying at an altitude of approximately 10,000 feet. The photograph was taken from a north-westerly direction. The photograph shows a large area of land, including a large body of water, a large area of land, and a large area of land. The photograph is a high-contrast, black and white photograph. The photograph is a high-contrast, black and white photograph.

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 39.42 1
2. BE NUMBER: 616-0305 2
3. IDENTIFICATION: Son Dong Army Bks and School 3
4. DATE OF INFORMATION: 5 Jan 68 4
DATE OF TISD: 6 Nov 68 5
DATE OF PHOTOGRAPHY: 6 July 66 6
DATE OF INTELLIGENCE REVIEW: 14 Oct 68 7
5. LOCATION: 21-03-25N 105-31-07E, located 1.5 NM S of Son Dong, approximately 19 NM W of Ha Noi. 8
9
6. DESCRIPTION: This army school and barracks facility covers approximately 225 acres and can accommodate up to 5000 troops and trainees. The facilities comprise 139 major buildings, including 65 barracks, 2 headquarters buildings, 17 storage structures, 35 support buildings, 2 ammunition storage buildings, and a number of miscellaneous possible school buildings. A rifle range, trenching and probable field artillery emplacements are located to the S of the target. 10
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7. SIGNIFICANCE: This installation reportedly accommodates an advanced officer training school for Infantry, Artillery, Armor, Signal, Political, and Chemical elements. 16
17
18
8. TARGET ENVIRONMENT: This installation is located in the Red River Valley and is surrounded by rice fields. To the N, E, and W are small villages and to the S are scrub-covered hills and an extensive road network. 19
20
21
9. DEFENSE ENVIRONMENT: 22
 - a. The target is within the SAM envelope. 23
 - b. AAA activity has been identified within 3 NM of target. 24
 - c. HMG and small arms fire is anticipated. 25
10. DAMAGE OBJECTIVE: Personnel casualties. Damage criterion is structural damage to barracks, storage, and support facilities with accompanying casualties. Damage level is 30%. 26
27
28
11. EFFECT ON NVN: Damage to this facility would interrupt various training activities; however, this activity could be directed to the Son Tay Military School and Training Facility (BE No. 616-0205). The overall NVN defensive positions would not be seriously affected. 29
30
31
32
12. RECUPERABILITY: If 30% destruction were incurred here, near normal operations could be resumed within 5 days, assuming temporary shelter or civilian housing are used. Replacement of both personnel and supplies would require no more than a week since this site is relatively close to both Ha Noi and other barracks installations and transportation routes are good. 33
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~~SECRET~~ NO FOREIGN DISSEM EXCLUDED FROM AUTOMATIC DOWNGRADING

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13. COLLATERAL DAMAGE:

a. None

b. Population

Casualties*

Target Area				Adjacent Area				Target Area				Adjacent Area			
Mil		Civ		Mil		Civ		Mil		Civ		Mil		Civ	
3000	0	500	25	180	0	5	0								

*Casualties estimated under daylight alert conditions.

14. RECOMMENDED WEAPONS AND SORTIES:

This is a large target complex comprised of seven areas. Five areas (with 7 sub-areas) have been delineated for weapons application. Weapons and sorties have been computed for each area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target are also shown:

(1) In order to achieve a damage level of 30%, weapons/sorties required over target:

WEAPON	250# SNAKEYE	or	500# SNAKEYE	or	500# BOMB	or	750# BOMB
Area A (700x150)	16/1		11/1		26/3		16/3
Area B-1 (600x300)	44/4		23/3		36/4		21/4
Area B-2 (600x300)	44/4		23/3		36/4		21/4
Area C-1 (300x150)	17/1		9/1		21/2		13/2
Area C-2 (400x100)	15/1		8/1		23/3		14/2
Area C-3 (300x200)	21/2		11/1		22/2		13/2
Area D-1 (150x75)	10/1		5/1		18/2		10/2
Area D-2 (250x200)	19/2		10/1		21/2		13/2
Area E (300x200)	21/2		11/1		22/2		13/2
TOTAL	207/18		111/13		225/24		134/23

(2) Weapons/sorties operationally required to achieve "over target" requirements shown above:

249/21	134/15	270/30	161/27
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(3) In order to achieve a damage level of 70%, weapons/sorties required over target:

WEAPONS	250# SNAKEYE	or	500# SNAKEYE	or	500# BOMB	or	750# BOMB
Area A	53/4		36/4		85/9		54/9
Area B-1	146/12		75/8		121/13		71/12
Area B-2	146/2		75/8		121/13		71/12
Area C-1	56/5		29/3		71/8		42/7
Area C-2	51/4		26/3		78/9		46/8
Area C-3	69/6		35/4		74/8		44/7
Area D-1	32/3		17/2		58/6		34/6
Area D-2	64/5		33/4		70/8		41/7
Area E	69/6		35/4		74/8		44/7
TOTAL	686/57		361/40		752/82		447/75

(4) Weapons/sorties operationally required to achieve "over target" requirements shown above:

824/69

434/48

903/100

537/90

15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 39.43 1
2. BE NUMBER: 616-1376 2
3. IDENTIFICATION: Kep Army Barracks South 3
4. DATE OF INFORMATION: 23 July 1968 4
DATE OF TISD: 3 June 1969 5
DATE OF PHOTOGRAPHY: 13 May 1967 6
DATE OF INTELLIGENCE REVIEW: 28 February 1969 7
5. LOCATION: 21-21-35N 106-16-00E, 0.5 NM ESE of Chu Nguyen, approximately 2.5 NM SW of Kep, 1.6 NM S of Kep Airfield. 8
9
6. DESCRIPTION: This active military installation consists of 4 areas and an extensive training area. Route 1A and the Ha Noi-Lang Son Railroad, runs WSW-ENE through the site. The target contains approximately 56 buildings including 10 barracks (4 multi-storied), 4 administrative buildings, 4 mess halls, 6 storage structures (4 revetted), 6 vehicle storage sheds, and 26 miscellaneous support buildings. The capacity of this target is estimated to be approximately 3,000 troops. 10
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16
7. SIGNIFICANCE: No specific military unit can be identified with this installation; however, its size and apparent activity are significant. The numerous vehicle revetments, vehicles and vehicle storage facilities suggest that this area may be artillery - or transportation-associated. 17
18
19
20
8. TARGET ENVIRONMENT: The 4 areas comprising this target are located in low hills surrounded by cultivated fields and small civilian settlements. A canal winds through the installation. 21
22
23
9. DEFENSE ENVIRONMENT: 24
 - a. The target is within the SAM envelope. 25
 - b. AAA activity has been identified within 3 NM of the target. 26
 - c. HMG and small arms fire is anticipated. 27
10. DAMAGE OBJECTIVE: Personnel casualties and destruction of barracks and support structures. Damage criterion is structural damage to buildings with accompanying casualties to personnel. Damage level is 30%. 28
29
30
11. EFFECT ON NVN: Damage to the installation would disrupt training activities and temporarily reduce the combat capability of the military units associated with this installation. 31
32
33
12. RECUPERABILITY: Near normal operations could be resumed within 36 hours if nearby cleared and level areas are utilized for field billeting. There is also sufficient civilian housing in the area to accommodate displaced troops and supplies. Replacement of equipment and supplies could probably be acquired within one week. 34
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~~SECRET~~ NO FOREIGN DISSEM EXCLUDED FROM AUTOMATIC DOWNGRADING

A-C-ABm-2

(Revised by 17th Note to Holders)

Tab ABm to
Annex C to
Appendix A

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13. COLLATERAL DAMAGE:

a. None

b. Population

Casualties*

Target Area		Adjacent Area		Target Area		Adjacent Area	
Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ
2800	0	200	30	168	0	2	0

*Casualties estimated under daylight alert conditions.

14. RECOMMENDED WEAPONS AND SORTIES:

This target is comprised of 4 areas. Two areas have been delineated for weapons application. Weapons and sorties have been computed for each area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target are also shown:

(1) In order to achieve a damage level of 30%, weapons/sorties required over target:

WEAPON	250# <u>SNAKEYE</u> or	500# <u>SNAKEYE</u> or	500# <u>BOMB</u> or	750# <u>BOMB</u>
Area A (890' x 825')	109/9	60/7	70/8	37/6
Area B (1580' x 980')	214/18	117/13	133/15	71/12
TOTALS:	323/27	177/20	203/23	108/18

(2) Weapons/Sorties operationally required to achieve "over target" requirements shown above:

388/32	212/24	244/28	130/22
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(3) In order to achieve a damage level of 70%, weapons/sorties required over target:

WEAPON	250# <u>SNAKEYE</u> or	500# <u>SNAKEYE</u> or	500# <u>BOMB</u> or	750# <u>BOMB</u>
Area A	368/31	201/22	236/26	125/21
Area B	721/60	395/44	447/50	237/40
TOTALS:	1089/91	596/66	683/76	362/61

(4) Weapons/sorties operationally required to achieve "over target" requirements shown above:

1307/109	715/79	820/91	434/73
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15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%

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A-C-ABm-3

(Revised by 17th Note to Holders)

Tab ABm to
Annex C to
Appendix A

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TAB ABn TO ANNEX C TO APPENDIX A

TARGET NO. 39.44



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A-C-AB_n-1

Tab APn to Annex C
to Appendix A

4-13

~~TOP SECRET~~

TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 39.44 1
2. BE NUMBER: 616-0458 2
3. IDENTIFICATION: Chi Ne Army Barracks 3
4. DATE OF INFORMATION: 28 September 1966 4
DATE OF TIS: 5 October 1966 5
DATE OF PHOTOGRAPHY: 7 September 1966 6
DATE OF INTELLIGENCE REVIEW: 22 September 1966 7
5. LOCATION: 20-29-08N 105-47-40E, UTM WH 831650, approximately one NM ESE 8
of Chi Ne and 22 NM NW of Nam Dinh. 9
6. DESCRIPTION: This military installation covers approximately 45 acres 10
and is located on Route 21. The site is fenced on two sides and is heavily 11
fortified with trenches and AW positions. There are approximately 70 build- 12
ings in the complex including 41 barracks, 24 support buildings, 3 mess halls, 13
and two administration buildings (one a probable auditorium). On the northern 14
edge of the site is an open storage area. Troop capacity is around 3,000. 15
7. SIGNIFICANCE: No specific military unit can be identified with this 16
installation; however, the size and apparent activity are significant. The 17
building count has increased by 6 over that noted in 1963 photography, of 18
which at least 5 are barracks. 19
8. TARGET ENVIRONMENT: This garrison is located on Route 21 in an open 20
cultivated valley between rugged karst formations. To the north of the target 21
are scattered civilian settlements and to the east are rice fields. Immedi- 22
ately to the south and west, the area is uncleared scrub, with a small river 23
and a lake or reservoir. 24
9. DEFENSE ENVIRONMENT: 25
 - a. Four SAM sites have been identified with SA-2 missile range (17.5 NM) 26
of this target and 21 additional sites are 18-30 NM distant. 27
 - b. Photography of 8 August 1965 records AAA defenses in this area for 28
the first time. Two circular sites were apparently occupied by probable 29
12.7mm/14.5mm (ZPU-2 or ZPU-4) or 37mm weapons. On the same date, 7 30
vehicles, possibly BTR-40's mounting 14.5mm ZPU-2's were photographed at 31
Chi Ne Barracks and approximately 1 NM ESE. 32
 - c. Moderate to intense HMG and small arms fire from the trenches and 33
foxholes associated with the barracks is anticipated. 34
10. DAMAGE OBJECTIVE: Personnel casualties and destruction of facilities. 35
Damage criterion is structural damage to barracks and support structures with 36
accompanying personnel casualties. Damage level is 30 percent. 37
11. EFFECT ON NVN: Damage to this facility would not significantly affect 38
the overall NVN posture as related to support of the Viet Cong and PL but 39
would demonstrate the vulnerability of permanent barracks installations des- 40
pite SA-2 defenses. 41

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12. RECUOPERABILITY: With 30% destruction achieved, it would probably take
less than 24 hours to provide shelter for displaced troops and supplies, either
under canvas or in civilian housing in the area. Replacement of personnel and
equipment could probably be acquired within 5 days to one week.

13. COLLATERAL DAMAGE:

a. Insignificant

b. Population

Casualties*

Target Area		Adjacent Area		Target Area		Adjacent Area	
Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ
2900	0	100	100	174	0	1	1

*Casualties estimated under daylight alert conditions.

14. RECOMMENDED WEAPONS AND SORTIES:

This target is comprised of five areas. Four areas have been delineated for weapons application. Weapons and sorties have been computed for each area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target are also shown:

(1) In order to achieve a damage level of 30%, weapons/sorties required over target:

WEAPON	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	750# BOMB
Area B (200x250)	19/2		41/3		21/2		13/2
Area C (800x1050)	150/12		198/17		102/12		60/10
Area D (250x500)	33/3		59/5		30/3		18/3
Area E (200x250)	19/2		41/3		21/2		13/2
Totals	221/19		339/28		174/19		104/17

(2) Weapons/sorties operationally required to achieve "over target" requirements shown above:

270/23	413/35	212/24	127/22
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(3) In order to achieve a damage level of 70%, weapons/sorties required over target:

WEAPON	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	750# BOMB	
Area B	64/5		138/11		71/8		44/7	3
Area C	507/42		670/56		344/38		202/34	4
Area D	112/10		200/17		102/11		61/10	5
Area E	64/5		138/11		71/8		44/7	6
Totals	747/62		1146/95		588/65		351/58	7

(4) Weapons/sorties operationally required to achieve "over target" requirements shown above:

911/76	1398/117	717/80	428/72	10
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15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%

11

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A-C-ABn-4

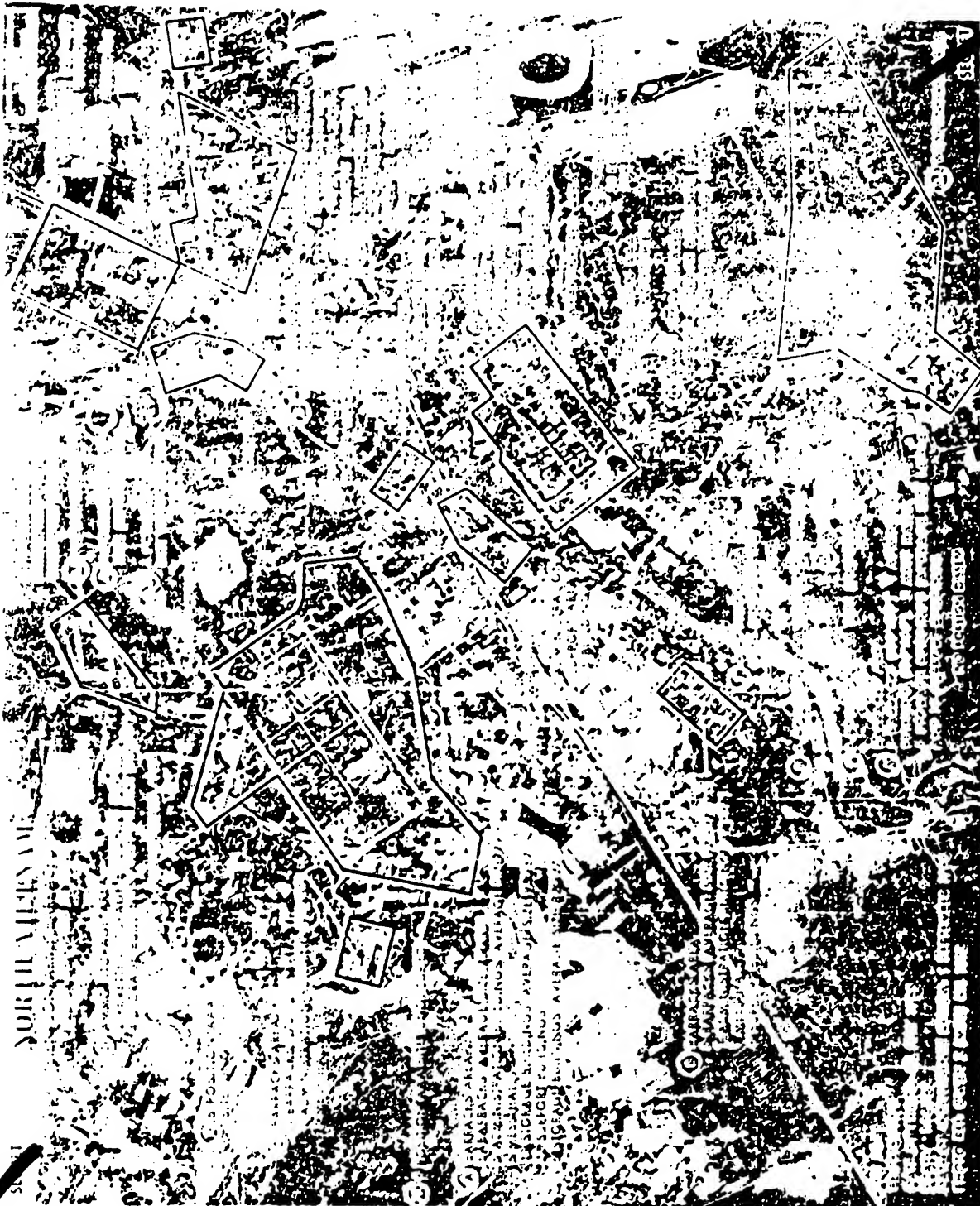
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TARGET NO. 39, 46



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(Revised by 10th N/H)

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 39.46 1
2. BE NUMBER: 616-0170 2
3. IDENTIFICATION: Bien Son Army Barracks NNE 3
4. DATE OF INFORMATION: 12 August 1966 4
DATE OF TIS: 24 August 1966 5
DATE OF PHOTOGRAPHY: 28 July 1965 6
DATE OF INTELLIGENCE REVIEW: 1 September 1965 7
5. LOCATION: 20-04-55N 105-51-35E, UTM WH 898205, approxi- 8
mately 1.4 NM N of Bien Son, 12.5 NM SW of Ninh Binh, approximately 9
14 NM NW of Thanh Hoa. 10
6. DESCRIPTION: This military installation covers approxi- 11
mately 7 square miles and is on both sides of the Thanh Hoa - Ninh 12
Binh road (Route 1) and railroad. There are 2 large and several 13
smaller barracks and storage areas with an aggregate of approxi- 14
mately 300 buildings. These include approximately 120 barracks, 15
96 administration/support buildings, 77 storage buildings, 4 re- 16
vetted possible ammunition storage structures and 10 mess halls. 17
The training facilities include driver-training areas, numerous 18
personnel and communications trenches, bunkers, field artillery 19
and AW weapons emplacements, AAA and mortar emplacements. Many 20
vehicle revetments are also in evidence. The barracks capacity 21
is estimated at 8,600 and the storage capacity is approximately 22
200,000 square feet. 23
7. SIGNIFICANCE: Order of Battle holds elements of the 304th 24
Infantry Division in this area. 25
8. TARGET ENVIRONMENT: This installation is located in an 26
area where flat, cultivated farmland merges with the irregularities 27
of hills and karst formations. There are numerous roads and paths 28
connecting the various areas; and the Song Tong flows through the 29
center of the installation. Small civilian settlements are inter- 30
spersed among the military areas. 31
9. DEFENSE ENVIRONMENT: 32
 - a. Ten SAM sites have been identified within SA-2 missile 33
range (17.5 NM) of this target and 12 additional missile sites are 34
18-30 NM distant. 35
 - b. Identified AAA defense activity in the Bien Son area 36
consists of 11 inactive AAA sites. 37
 - c. Intense machine gun/small arms fire from the barracks 38
and training area can be anticipated.

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10. DAMAGE OBJECTIVE: Personnel casualties and destruction of facilities. Damage criterion is structural damage to barracks and support buildings with accompanying personnel casualties. Damage level is 30%. 1
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11. EFFECT ON NVN: Disruption of training of regular troops and reduction in support to infiltration activities. 5
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12. RECUPERABILITY: With destruction level at 30%, at least 48 hours would be required to salvage supplies and equipment and to relocate displaced personnel. There is ample civilian housing within and around this installation to provide shelter for both categories. Several weeks would be required to rebuild the facilities to pre-strike condition; however, it is probable that the temporary accommodations available will be used as long as bombing activity persists. Replacement of supplies would probably require 5 to 7 days. 7
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13. COLLATERAL DAMAGE: 16

a. Insignificant. 17

b. Population Casualties* 18

Target Area		Adjacent Area		Target Area		Adjacent Area	
Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ
3000	0	200	200	180	0	2	2

 19
20
21

*Casualties estimated under daylight alert conditions. 22

14. RECOMMENDED WEAPONS AND SORTIES: 23

This is a very large barracks complex and is comprised 24
14 areas. Eleven areas (with 4 sub-areas) have been delineated for 25
weapons application. Weapons and sorties have been computed for 26
each area. To show the effort required to achieve the damage level 27
prescribed, total weapons/sorties required over the target are also 28
shown: 29

(1) In order to achieve a damage level of 30%, weapons/ 30
sorties required over target: 31

WEAPON	250#		or	250#		or	500#		or	750#	
	SNAKEYE			BOMB			BOMB			BOMB	
Area A-1 (1100x2400)	487/41			542/45			253/28			163/27	32
Area A-2 (250x1100)	62/5			107/9			55/6			32/5	33
Area B (300x700)	49/4			79/7			41/5			24/4	34
Area C (400x600)	56/5			80/7			41/5			24/4	35
Area D-1 (300x600)	51/4			82/7			82/9			82/14	36

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WEAPON	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	750# BOMB	
Area E (300x900)	60/5		96/8		49/5		29/5	1
Area F (300x550)	41/3		66/6		34/4		20/3	2
Area G (700x1450)	198/16		236/20		122/14		71/12	3
Area H (900x1400)	244/20		280/23		143/16		84/14	4
Area L (450x1000)	95/8		127/11		65/7		38/6	5
Area M-1 (600x1450)	172/14		211/18		109/12		64/11	6
Area M-2 (400x550)	53/4		75/6		39/4		23/4	7
Area P-1 (750x1450)	212/18		249/21		122/14		75/12	8
Totals	1780/147		2230/198		1161/129		729/121	9

(2) Weapons/sorties operationally required to achieve "over target" requirements shown above:

2171/181 2719/229 1415/157 889/148 12

(3) In order to achieve a damage level of 70%, weapons/sorties required over target: 13 14

WEAPON	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	750# BOMB	
Area A-1	1640/137		1830/152		853/95		550/92	15
Area A-2	209/17		361/30		186/21		108/18	16
Area B	165/14		266/22		138/15		81/14	17
Area C	189/16		270/23		139/15		81/14	18
Area D-1	172/14		276/23		276/31		276/46	19
Area E	202/17		324/27		165/18		98/16	20
Area F	138/12		223/19		115/13		68/11	21
Area G	668/56		795/66		412/46		240/40	22
Area H	823/69		945/79		483/54		283/47	23
Area L	320/27		428/36		219/24		128/21	24
Area M-1	580/48		712/59		368/41		216/36	25
Area M-2	179/15		253/21		132/15		78/13	26
Area P-1	715/60		835/70		432/48		253/42	27

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WEAPON	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	750# BOMB	
Totals	6000/502		7518/627		3918/436		2460/410	1
(4) Weapons/sorties operationally required to achieve "over target" requirements shown above:								2
	7317/612		9168/765		4778/532		3000/500	3
15. <u>PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL:</u>							50%	4
								5

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TARGET NO. 39.47



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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 39.47 1
2. BE NUMBER: 617-1511 2
3. IDENTIFICATION: Giap Rong Army Barracks 3
4. DATE OF INFORMATION: 18 Sept 65 DATE OF TIS: 9 November 1965 4
5
5. LOCATION: 18-49-15N 105-12-00E, UTM WF 209809, approximately 4 NM SW of Phu Van. 6
7
6. DESCRIPTION: This facility consists of 8 barracks, 2 administration/headquarters buildings, approximately 26 support buildings and 6 storage structures. Five of the barracks and several of the support buildings are enclosed by a fence. There is evidence that 4 additional buildings have been dismantled. To the south of the barracks area is a small wooded hill having excavation scars around its base which suggest possible underground storage. An additional 3 probable barracks, located to the SE of the main complex, are connected to both the main barracks area and the excavation area by road and trenches. There are numerous personnel trenches in and around this installation. The barracks capacity is estimated at approximately 660 troops. 8
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7. SIGNIFICANCE: This facility is to the west of the Vinh Son area military complex and possibly provides some support to the 328th Infantry Brigade. The installation also has access to two main routes to Laos, Routes 7 and 8, and could support infiltration activities. 21
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8. TARGET ENVIRONMENT: This installation is located on the eastern edge of Giap Rong village and is surrounded by small fields and or chards. The Song Giang is to the NW of this site and to the south is a range of low wooded hills. 26
27
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9. DEFENSE ENVIRONMENT: 30
 - a. No AAA defenses are known to be in the vicinity of this target. The closest sites are over 5 NM to the E and NE in the areas of Phu Van and Vinh Son. These defenses consist of 9 active sites (18 occupied/1 unoccupied 57mm/85mm positions, 9 occupied/11 unoccupied 57mm/85mm positions and 4 occupied HMG positions. In addition, there are 23 inactive sites (53 unoccupied 14.5mm/37mm positions, 48 unoccupied 57mm/85mm positions and 20 unoccupied HMG positions). AW and small arms fire can be expected from the troops manning trenches. 31
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 - b. There are no SA-2 missile sites within a 60 NM radius of this target. 41
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10. DAMAGE OBJECTIVE: Personnel casualties. Damage criterion is structural damage to barracks, administrative and storage buildings with accompanying casualties. Damage level is 30%. 43
44
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(Added - 5 January 1966)

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11. EFFECT ON DRV: Damage to this installation would have no significant effect on the DRV defense posture; however, a strike on this installation would probably interrupt infiltration support. In addition, such action would further demonstrate the vulnerability of even comparatively isolated military installations.

12. RECUPERABILITY: With a destruction level of 30%, it would take approximately 48 hours to resume limited barracks operation; however, it is probable that troops housed here would be dispersed to the nearby village or to the wooded hills to the south. Replacement of troops and supplies could be accomplished within 3 to 4 days, if available in the Phu Van - Vinh Son area to the NE.

13. COLLATERAL DAMAGE: Insignificant.

14. RECOMMENDED WEAPONS AND SORTIES:

a. In order to achieve a damage level of 30%, weapons/sorties required over target:

Weapon:	250# <u>SNAKEYE</u>	or	250# <u>BOMB</u>	or	500# <u>BOMB</u>	or	750# <u>BOMB</u>
Area A	15/1		37/3		19/2		11/2
Area B	33/3		67/5		34/4		20/3
Area C	81/7		103/9		53/6		31/5
Totals	129/11		207/17		106/12		62/10

b. Weapons/sorties operationally required to achieve "over target" requirement shown above:

157/13	252/21	129/14	76/13
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c. In order to achieve a damage level of 70%, weapons/sorties required over target:

Area A	51/4	125/10	64/7	37/6
Area B	111/9	226/19	115/13	68/11
Area C	273/23	347/29	179/20	105/18
Totals	435/36	698/58	358/40	210/35

d. Weapons/sorties operationally required to achieve "over target" requirement shown above:

530/44	851/71	437/49	256/43
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15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%.

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(Added - 5 January 1966)

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~~(D) P. 12, 13, 14, 15, 16, 17~~

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TARGET NO. 39.49



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Tab ABs to Annex C
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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 39.49 1
2. BE NUMBER: 617-1324 2
617-1569 3
3. IDENTIFICATION: Quang Khe Army Bks 4
4. DATE OF INFORMATION: 1 November 1965 DATE OF TIS: 5
20 Dec 1965 6
5. LOCATION: 17-41-58N/106-29-20E and 17-41-10N/106-30-00E, 7
UTM XE 581573 and XE 590563 8
6. DESCRIPTION: These facilities are located at the mouth 9
of the Song Giang and immediately to the east and southeast 10
of the Quang Khe Naval Base (JCS #74A). The site is comprised 11
of two rather widely separated barracks areas. The larger 12
concentration of buildings (BE 617-1324) is partially fenced 13
and contains approximately 7 barracks, 2 administration/ 14
barracks-type structures, 1 mess hall, 1 storage/support 15
building, 2 small utility buildings, 16
and 1 building of undetermined use. There are about 7 17
unidentified structures, 3 quarters/support buildings and 18
4 storage/support buildings located outside and nearby the 19
partially fenced area. The smaller barracks area (BE 617-1569) 20
is located to the SE and contains 3 barracks and 4 support 21
buildings. The two barracks sites are connected by road. 22
The estimated barracks capacity of the two areas is approxi- 23
mately 800 troops. 24
7. SIGNIFICANCE: No specific military unit can be 25
identified with this target. Troops accommodated here are 26
probably security forces and could support both the naval 27
base and coastal defense activities. 28
8. TARGET ENVIRONMENT: These facilities are located in 29
the flat sandy area at the mouth of the Song Giang and 30
between Route 1 and the Gulf of Tonkin. Civilian settlements 31
and rice fields lie to the west of the target and a range of 32
scrub-covered hills are located to the south. 33
9. DEFENSE ENVIRONMENT: 34
 - a. There are no known SAM defenses in this area. 35
 - b. Identified AAA defense in the Quang Khe area consist 36
of four 57mm/85mm sites (3 occupied/15 unoccupied positions) 37
and seven 37mm sites (3 occupied/26 unoccupied positions). 38
Occupied HMG positions have been noted in the area. 39
 - c. AW and small arms fire can be anticipated from 40
both barracks areas. 41
 - d. This target does not lie within the NVN GCI 42
capability.
10. DAMAGE OBJECTIVE: Personnel casualties. Damage 43
criterion is destruction of barracks, storage and support 44
structures with accompanying personnel casualties. Damage 45
level is 30%. 46

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11. EFFECT ON DRV: Damage to this installation would temporarily reduce the coastal defense capability in this area but would not appreciably affect the overall DRV defense posture.

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12. RECUPERABILITY: Limited operations could probably be effected within 24 hours; however, clearing of debris and reconstruction would require 2 weeks or more. Displaced personnel could be quartered in nearby civilian housing. Replacement of supplies could probably be accomplished within 1 week.

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13. COLLATERAL DAMAGE: Insignificant.

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14. RECOMMENDED WEAPONS AND SORTIES:

12

This target complex is comprised of four areas. Weapons and sorties have been computed for each area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target area also shown:

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14
15
16
17

(1) In order to achieve a damage level of 30%, weapons sorties required over target:

18
19

Weapon	250# <u>SNAKEYE</u>	or	250# <u>BOMB</u>	or	500# <u>BOMB</u>	or	750# <u>BOMB</u>	
Area A	22/2		54/4		28/3		16/3	20
Area B	58/2		95/8		49/5		29/5	21
Area C	14/1		37/3		19/2		11/2	22
Area D	23/2		43/4		22/3		13/2	23
Totals	117/10		229/19		118/13		69/12	24

(2) Weapons/sorties operationally required to achieve "over target" requirement shown above:

25
26

143/12 279/23 144/16 84/14

27

(3) In order to achieve a damage level of 70%, weapons/sorties required over target:

28
29

Weapon	250# <u>SNAKEYE</u>	or	250# <u>BOMB</u>	or	500# <u>BOMB</u>	or	750# <u>BOMB</u>	
Area A	75/6		183/15		95/11		54/9	30
Area B	196/16		321/27		166/19		98/17	31
Area C	48/4		125/11		65/7		38/6	32
Area D	78/7		146/12		75/8		44/7	33
Totals	397/33		775/65		401/45		234/39	34

(4) Weapons/sorties operationally required to achieve "over target" requirement shown above:

35
36

484/40 945/79 489/54 285/48

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15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%

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(Added - 5 January 1966)

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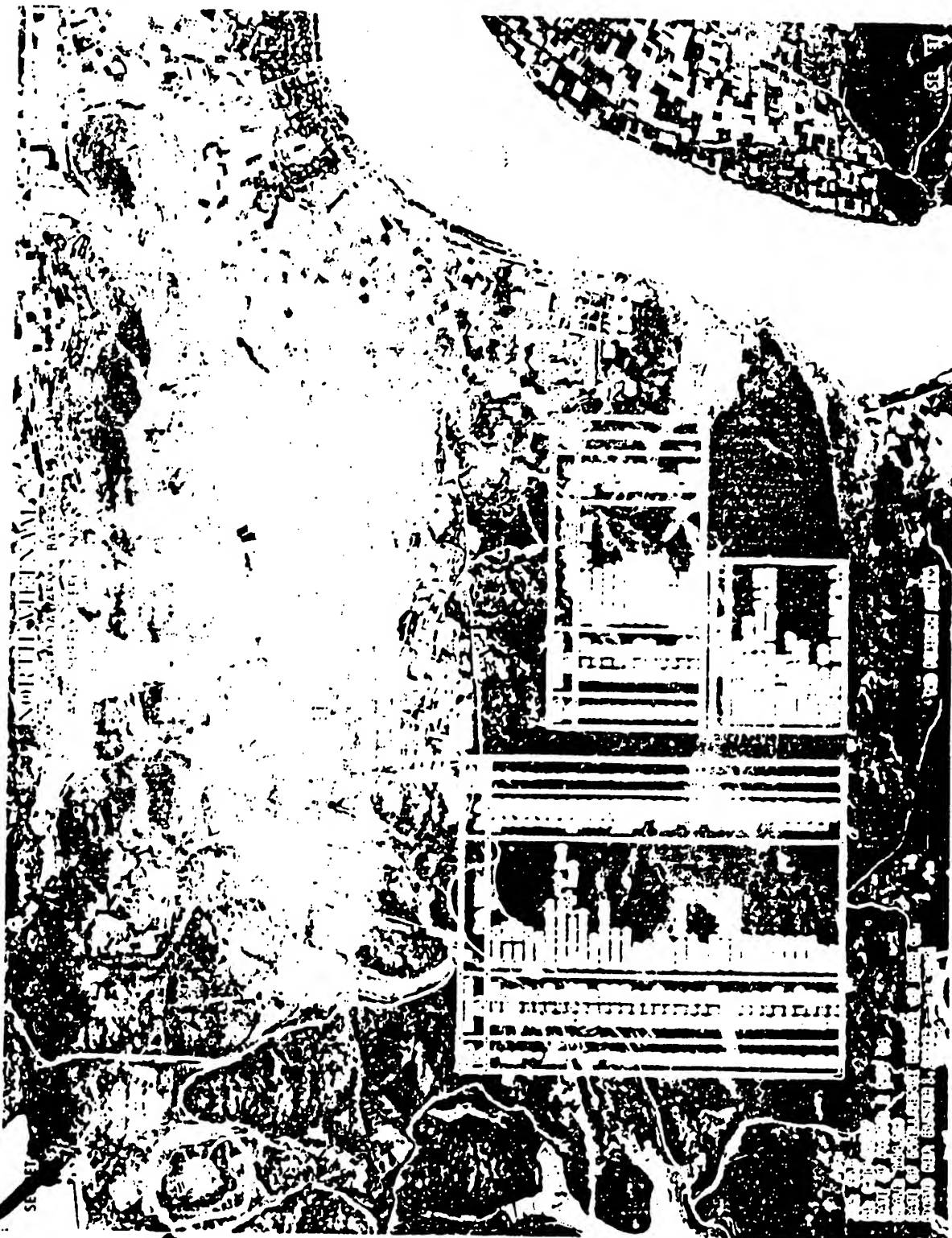
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TARGET NO. 39.5



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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 39.5 1
2. BE NUMBER: 617-0237 2
3. IDENTIFICATION: Xom Trung Hoa Army Barracks and Supply Depot NW 3
4
4. DATE OF INFORMATION: 23 Jan 1965 DATE OF TIS: 12 May 1965 5
6
5. LOCATION: 18-42-40N 105-28-36E, UTM WF 503687. 12 NM WNW of Vinh. 7
8
6. DESCRIPTION: This installation contains two general areas, the main depot site and the barracks/support area. The installation has an aggregate of 81 major structures and is dispersed over a wide area. A storage and support area is located at the extreme eastern end of the complex and on the banks of the Song Ca. There are 2 groups of buildings in this area which comprise 7 warehouses, 1 administration building, a mess hall, 7 storage buildings and 4 support/maintenance type structures. There are also 2 guardhouses and 2 small ammunition storage buildings in this general area. The barracks and support facilities and additional storage are located approximately .5 NM to the northwest. The barracks areas contain a total of 23 barracks, 2 administration buildings, 3 mess halls and approximately 15 support/storage structures. The storage area contains 3 warehouses and 1 maintenance type building. Adjacent to the area is a revetted ammo storage building. The areas within the complex are road and water served. The estimated capacity of this installation is approximately 93,000 sq ft storage space and 1,350 troops. 9
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7. SIGNIFICANCE: Target is located midway between Vinh and the Vinh Son Military Complex which serves the 324th Inf Bde. The installation has access to Route 7 and Route 8, both of which are main avenues for North Vietnamese support of operations in Laos. 29
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31
32
33
8. TARGET ENVIRONMENT: Target is bounded on the north by generally flat lowland bordering the Song Ca River. To the south is a small range of wooded hills and Xom Trung Hoa village is approximately 1.4 NM southeast of the installation. 34
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9. DEFENSE ENVIRONMENT: No AAA defenses have been identified in the target area. The closest AAA sites are associated with the Vinh complex, 12 NM east of the target. The closest radar is also in the Vinh area and consists of 2 FIRE CAN, 1 KNIFEREST B, 1 RUS, 1 SCR-270 and 1 SCR-584. 39
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10. DAMAGE OBJECTIVE: Personnel casualties and destruction of stored materials. Damage criterion is structural damage to storage buildings and accompanying damage to contents and to personnel. Damage level is 30 percent. 44
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11. EFFECT ON DRV: Major limitation on support of the PL/VC and support of the 324th Bde which has historically supported VC with infiltrators. 1 2

12. RECUPERABILITY: With 30% destruction achieved, the barracks portion of the depot could probably resume operations within 24 hours. Adjacent areas contain sufficient unoccupied space to accommodate troops, assuming field billeting is used. Replacement of personnel could be accomplished within 24 hours since the target has road access to several military installations within the Vinh Son complex to the north. Replacement of stored supplies could possibly be accomplished within 2-5 days, depending upon availability and replenishment priorities. 3 4 5 6 7 8 9 10 11 12

13. COLLATERAL DAMAGE: Insignificant. 13

14. RECOMMENDED WEAPONS AND SORTIES: 14

a. This is a large target complex comprised of five areas. Weapons and sorties have been computed for each area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target is also shown. 15 16 17 18 19

(1) In order to achieve a damage level of 30% weapons/sorties required over target: 20 21

Weapon:	250# <u>SNAKEYE</u>	or	250# <u>BOMB</u>	or	500# <u>BOMB</u>	or	750# <u>BOMB</u>	
Area A	60/5		78/7		40/5		24/4	22
Area B	60/5		96/8		57/7		39/7	23
Area C	91/8		116/10		60/7		35/6	24
Area D	60/5		78/13		40/5		24/4	25
Area E	34/3		57/5		29/4		15/3	26
TOTALS:	305/26		425/36		226/26		139/24	27

(2) Weapons/sorties operationally required to achieve "over target" requirement shown above: 28 29

372/32	518/44	276/32	170/29	30
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(3) In order to achieve a damage level of 70% weapons/sorties required over target:

1
2

Weapon:	250# <u>SNAKEYE</u>	or	250# <u>BOMB</u>	or	500# <u>BOMB</u>	or	750# <u>BOMB</u>	
Area A	202/17		263/22		135/9		81/14	3
Area B	202/17		324/28		192/22		132/22	4
Area C	307/27		392/33		202/23		118/20	5
Area D	202/17		263/22		135/15		81/14	6
Area E	115/10		192/16		98/11		58/10	7
TOTALS:	1028/86		1434/120		762/85		470/79	8

(4) Weapons/sorties operationally required to achieve 9 "over target" requirement shown above:

9
10

1254/105	1749/146	929/104	573/96	11
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15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%. 12

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 39.51 1
2. BE NUMBER: 617-1138 2
3. IDENTIFICATION: Nam Son Barracks 3
4. DATE OF INFORMATION: 12 August 1966 4
DATE OF TIS: 7 September 1966 5
DATE OF PHOTOGRAPHY: 3 April 1966 6
DATE OF INTELLIGENCE REVIEW: 2 May 1966 7
5. LOCATION: 18-44-47N 105-43-34E, UTM WF 786708, approximately 5.5 NM NE of Vinh. 8
9
6. DESCRIPTION: This installation is fence-secured and contains approximately 9 major buildings including one large multi-story and one single-story administration buildings, 4 barracks, two support buildings and a mess hall. There are several small structures just outside the fence and two additional buildings appear to be under construction. An additional administration building and a guard tower have been dismantled since 8 October 1965 photography. A communication trench extends from one corner of the site to a wooded area nearby. AAA defense positions, additional trenching and foxholes are located to the southeast of the target. The barracks capacity is estimated at around 230 troops. 10
11
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17
18
19
7. SIGNIFICANCE: This installation is possibly associated with the 271st Independent Infantry Division which is reportedly in the Vinh area. A Logistic Officers School and an Intelligence Language School are also believed to be in this general area. 20
21
22
23
8. TARGET ENVIRONMENT: This installation is located in the coastal lowlands just west of the Song Ca. The area is heavily cultivated and long narrow stretches of rice paddies are dotted with small farm villages. 24
25
26
9. DEFENSE ENVIRONMENT: 27
 - a. No SAM sites have been identified within SA-2 missile range (17.5 NM) of the target. However, 5 SAM sites have been identified between 16-20 NM distant. 28
29
30
 - b. Identified AAA activity in the Vinh area includes 40 active AAA sites, consisting of 73 occupied 57mm/85mm revetments and 129 occupied 37mm revetments. In addition, there are 95 inactive sites in the area. (DOB: 17 June 1965 - 21 July 1966) 31
32
33
34
 - c. Intense HMG and small arms fire is anticipated from numbers of troops and prepared AW positions. 35
36

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A-C-ADA-2

Tab ADa to
Annex C to
Appendix A

(revised by 11th Note to Holders)

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10. DAMAGE OBJECTIVE: Structural damage to buildings with resulting loss of personnel and equipment. Damage level is 30 per cent. 1
2

11. EFFECT ON NVN: Damage to this target would have a minimal effect on the NVN defense posture; however, possible training would be disrupted and the vulnerability of stationary military targets would be further demonstrated. 3
4
5
6

12. RECUPERABILITY: This facility could probably resume limited operations within 24 hours; however, activities involved here would probably be dispersed to nearby civilian areas. 7
8
9

13. COLLATERAL DAMAGE: 10

a. None 11

b. Population Casualties* 12

Target Area Adjacent Area Target Area Adjacent Area 13

Mil Civ Mil Civ Mil Civ Mil Civ 14

200 0 30 25 12 0 0 0 15

* Casualties estimated under daylight alert conditions. 16

14. RECOMMENDED WEAPONS AND SORTIES: 17

a. In order to achieve a damage level of 30%, weapons/sorties required over target: 18
19

WEAPON	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	750# BOMB	
Area A (200x450)	26/3		52/5		27/3		16/3	20

b. Weapons/sorties operationally required to achieve "over target" requirements shown above: 21
22

32/3	63/6	33/4	20/4	23
------	------	------	------	----

c. In order to achieve a damage level of 70%, weapons/sorties required over target: 24
25

WEAPON	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	750# BOMB	
Area A	88/8		175/15		91/11		54/9	26

d. Weapons/sorties operationally required to achieve "over target" requirements shown above: 27
28

107/9	213/18	111/13	66/11	29
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15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50% 30

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A-C-ADa-3

Tab ADa to
Annex C to
Appendix A

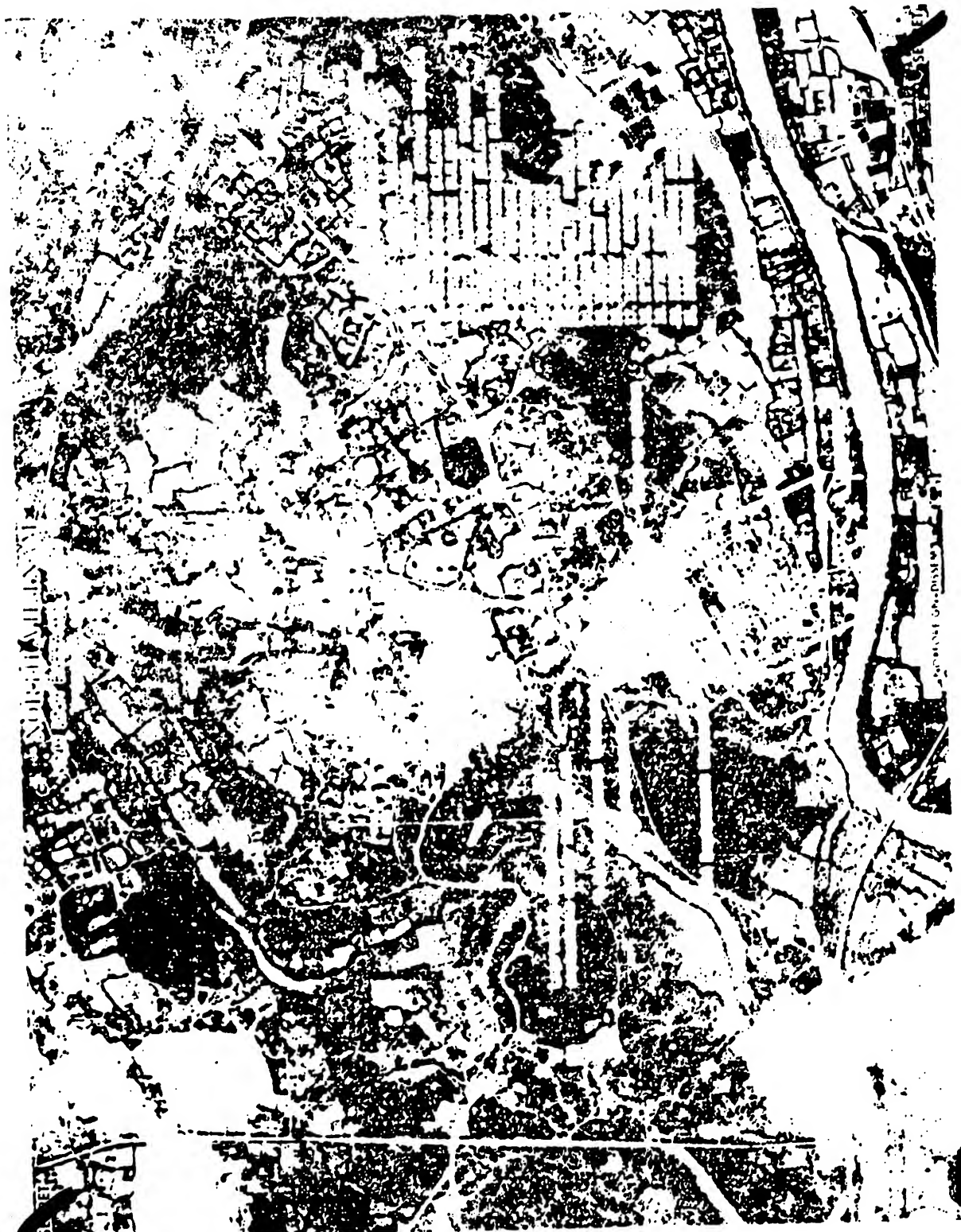
(Revised by 11th Note to Holders)

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A-C-AE-

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TARGET INFORMATION SHEET AND STRIKE DATA

1. TARGET NUMBER: 39.6 1
2. B.E. NUMBER: 617-0805 2
3. IDENTIFICATION: Vinh Linh Army Barracks SW 3
4. DATE OF INFORMATION: 2 June 1965 DATE OF TIS: 13 July 1965 4
5
5. LOCATION: 17-03-00N 106-58-46E, UTM 48Q YD 107859. 6
3.6 NM SW of Chap Le. 7
6. DESCRIPTION: This is an active military area on the N 8
side of the Ben Xe river containing 6 barracks-type buildings, 9
8 warehouse-type buildings and an administration building, an 10
auditorium, 2 utility/support-type buildings, a vehicle shed, 11
a gate house and other miscellaneous small buildings. It has 12
a capacity for 400 troops and 300 tons of supplies. On the 13
river bank is a probable landing area for supply boats. Along 14
the road leading N are 7 vetted vehicle emplacements and 15
further north are several training revetments. 1 NM ESE on 16
the S bank of the river is a barracks area approximately the 17
same size (400-500 troop capacity) and with trenches and field 18
fortifications adjacent on an EW trending ridge. 19
7. SIGNIFICANCE: Part of the Demarcation Zone defenses. 20
Probably also support troops infiltrating into South Vietnam. 21
8. TARGET ENVIRONMENT: Terrain is flat and intensely culti-22
vated lowland at the edge of the Ben Xe and 5 NM SW of the 23
Gulf of Tonkin. Approximately 2.5 NM NW of the DMZ. 24
9. DEFENSE ENVIRONMENT: There are 7 active AAA sites in the 25
Vinh Linh-Chap Le area consisting of 28 occupied 14.5mm/37mm 26
positions. In addition there are 36 inactive sites consisting 27
of 155 unoccupied positions. There are no occupied HMG sites. 28
Four EW radar are in the Vinh Linh area. Heavy small arms fire 29
can be anticipated from troops in the area. 30
10. DAMAGE OBJECTIVE: Structural damage to barracks, adminis-31
tration and storage buildings with accompanying personnel 32
casualties. Damage level is 30%. 33
11. EFFECT ON DRV: Reduce level of DMZ defense capability 34
immediately N of 17th parallel and infiltration support to 35
South Vietnam. 36
12. RECUPERABILITY: Barracks area would probably be opera- 37
tional in 12 to 24 hours as there is ample room for field 38
billeting. Destroyed supplies would take from 24 to 72 hours 39
depending on priorities. 40
13. COLLATERAL DAMAGE: Insignificant. 41
14. RECOMMENDED WEAPONS AND SORTIES: 42
a. In order to achieve a desired damage level of 30%, 43
weapons/sorties required over target: 44

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A-C-AE-2

Tab AE to
Annex C to
Appendix A

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Weapon: 250# 250# 500# 750#
SNAKEYE BOMB BOMB BOMB

171/14 199/17 102/11 60/10

1

b. Weapons/sorties operationally required to achieve
"over target" requirements shown above:

2

3

209/17 243/21 124/13 73/12

4

c. In order to achieve a desired damage level of 70%,
weapons/sorties required over target:

5

6

Weapon: 250# 250# 500# 750#
SNAKEYE BOMB BOMB BOMB

576/48 671/56 344/38 202/34

7

d. Weapons/sorties operationally required to achieve
"over target" requirements shown above:

8

9

702/59 612/68 420/46 246/41

10

15. PROBABILITY OF ACHIEVING DAMAGE LEVEL: 50%.

11

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A-C-AE-3

Tab AE to
Annex C to
Appendix A

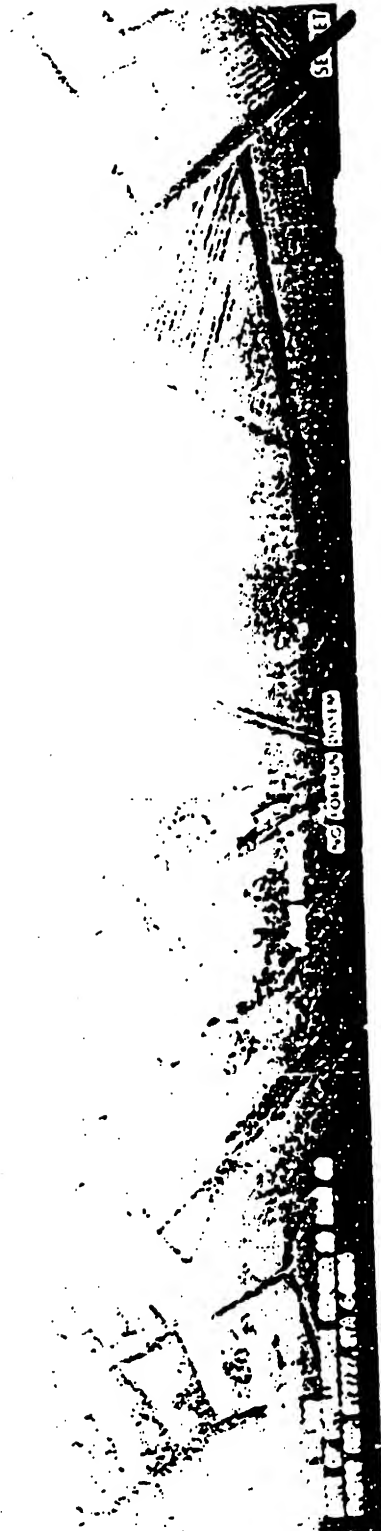
(Revised by 7th Note to Holders)

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TAB AF TO ANNEX C TO APPENDIX A

TARGET NO. 39.7



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A-C-AF-1

Tab AF to Annex " " to Appendix A

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~~TOP SECRET~~

TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 39.7 1
2. BE NUMBER: 617-0226 2
3. IDENTIFICATION: Vinh Linh Army Barracks E Lien Cong 3
4. DATE OF INFORMATION: 2 March 1965. 4
DATE OF TIS: 5 April 1965 5
5. LOCATION: 17-03-16N/107-02-40E, UTM YD 173873 6
6. DESCRIPTION: This installation is approximately 1 NM 7
east of Vinh Linh Army Barracks Central NE (BE 0617-0081). 8
The target area contains 8 barracks, one administration 9
building and a parade ground. The installation facilities 10
also include a mess hall and air explosives storage building. 11
Many small storage and support-type structures are scattered 12
throughout the area immediately surrounding the barracks. 13
The installation appears to be partially enclosed; however, 14
type of enclosure cannot be determined. The estimated capa- 15
city of the barracks is approximately 1,000 troops. 16
7. SIGNIFICANCE: This installation probably houses a 17
component of the 270th Independent Infantry Regiment which is 18
carried heavily overstrength at an estimated total of 5,000. 19
It has access to Route 1 and is well situated to support 20
infiltration to the south. 21
8. TARGET ENVIRONMENT: The target is located in open flat 22
terrain and is surrounded by cultivated fields. A probable 23
State Farm is located nearby and to the NNW of the target. 24
9. DEFENSE ENVIRONMENT: 25
 - a. Defenses for the installation consist of personnel 26
trenching with firing bays and AW positions are located 27
along the perimeter of the installation. Foxholes and AW 28
positions are also located at strategic points within the 29
installation. There are 28 AAA sites in the Vinh Linh-Chap 30
Le area, having a total of 120 light positions; however, on 31
5 March 1965 only 5 sites with 18 positions were active. 32
 - b. Within a 10 NM radius of Vinh Linh are three EW radar: 33
A KNIFEREST B, a RUS-2, and a SCR-270. Early warning 34
detection capabilities are: 35
 - (1) 60 NM for A-1 and F-101 aircraft at 3,000 ft. 36
 - (2) 80 NM for A-1 and F-101 aircraft at 5,000 ft. 37
 - (3) 120 NM for F-101 aircraft at 15,000 ft. 38
10. DAMAGE OBJECTIVE: Personnel casualties. Damage 39
criterion is structural damage to barracks and admini- 40
stration and storage buildings with accompanying person- 41
nel casualties and destruction of supplies. Damage level 42
is 30 percent. 43

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A-C-AP-2

Tab AF to
Annex C to
Appendix A

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11. EFFECT ON NVN: Thirty percent damage level would reduce the support for DRV troops immediately north of the DMZ and would probably reduce the support for Viet Cong forces in the NW part of South Vietnam.

12. RECUPERABILITY: With 30% destruction achieved, the organization could probably resume operations within 24 hours, assuming temporary accommodations are set up under canvas. Replacement of personnel and supplies could probably be obtained within 1-3 hours from other elements of the Vinh Linh Military Complex, depending upon availability and priorities.

13. COLLATERAL DAMAGE: Insignificant

14. RECOMMENDED WEAPONS AND SORTIES:

a. In order to achieve a damage level of 30%, weapons/sorties required over target:

Weapon:	250# <u>SNAKEYE</u>	250# <u>BOMB</u>	500# <u>BOMB</u>	750# <u>BOMB</u>
	40/3	64/5	33/4	20/3

b. Weapons/sorties operationally required to achieve "over target" requirements shown above:

49/4	78/6	40/5	24/4
------	------	------	------

c. In order to achieve a damage level of 70%, weapons/sorties required over target:

135/12	216/18	111/12	68/11
--------	--------	--------	-------

d. Weapons/sorties operationally required to achieve "over target" requirement shown above:

165/15	263/22	135/15	83/13
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15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%.

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A-C-AF-3

Tab AF to
Annex C to
Appendix A

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TAB AG TO ANNEX C TO APPENDIX A
TARGET NO. 39.8



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A-C-AG-1

Tab AG to Annex C
to Appendix A

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 39.8 1
2. BE NUMBER: 617-0225 2
3. IDENTIFICATION: Vinh Linh Army Barracks NW Xom Cho 3
4. DATE OF INFORMATION: 5 January 1965 4
DATE OF TIS: 15 Feb 66 5
5. LOCATION: 17-04-10N/107-00-48E, UTM YD 103916 6
6. DESCRIPTION: Vinh Linh Army Barracks NW, Xom Cho, are 7
part of an active military complex in the vicinity of Vinh 8
Linh. There are three separate areas within the installation. 9
Area 1 contains 27 barracks, 5 warehouses, 3 supply buildings, 10
1 administration building, a possible parade ground. Route 1 11
separates areas 1 and 2. Area 2 contains 1 administration 12
building, 3 warehouses, 7 support buildings, and probable 13
open storage. Area 3 is to the east of area 1 and contains 14
the following: 3 barracks, 2 administration building, 15
12 shed-type revetments, a probable motor pool, a parade 16
ground and a probable open storage area. To the north of the 17
installation is a training area containing fox holes, 18
trenching and evidence of AAA training. 19
7. SIGNIFICANCE: These facilities probably accommodate 20
elements of the 270th Independent Infantry Regiment which is 21
currently carried heavily over-strength at an estimated total 22
of 5000. This target can house approximately 1,200 personnel. 23
8. TARGET ENVIRONMENT: This target is approximately .8 NM 24
WNW of Vinh Linh and is bisected by Route 1. The surrounding 25
terrain is flat intensively cultivated lowland with scattered 26
small villages. 27
9. DEFENSE ENVIRONMENT: 28
 - a. There are 5 active AAA sites in the Vinh Linh - Chap 29
Le area made up of 16 occupied/2 unoccupied 14.5-37mm 30
positions and 23 inactive sites with 106 unoccupied 31
14.5-37mm positions. 32
 - b. The major areas of the target are secured both by 33
fencing and trenches. AW fire should be anticipated. 34
 - c. There are 3 EW radar within a 10 NM radius of Vinh 35
Linh. 36
10. DAMAGE OBJECTIVE: Personnel casualties. Damage cri- 37
terion is structural damage to barracks, administration, and 38
storage buildings with accompanying personnel casualties. 39
Damage level is 30 percent. 40
11. EFFECT ON DRV: Thirty percent damage level would 41
reduce the support for the DRV forces immediately north of 42
the DMZ at the 17th parallel and would probably reduce sup- 43
port for Viet Cong forces in the NW part of South Vietnam. 44

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12. RECUPERABILITY: Barracks area would probably be operational with 6 to 12 hours as there is ample space for field billeting.

13. COLLATERAL DAMAGE: Moderate to surrounding area.

14. RECOMMENDED WEAPONS AND SORTIES:

a. This is a large target complex comprised of three areas. Weapons and sorties have been computed for each area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target is also shown.

(1) In order to achieve a damage level of 30% weapons/sorties required over target:

Weapon:	250# <u>SNAKEYE</u>	or	250# <u>BOMB</u>	or	500# <u>BOMB</u>	or	750# <u>BOMB</u>	
Area A	101/8		130/11		67/8		39/6	13
Area B	57/5		86/7		44/5		26/4	14
Area C	69/6		108/9		56/6		33/6	15
TOTALS:	227/19		324/27		167/19		98/16	16

(2) Weapons/sorties operationally required to achieve "over target" requirement shown above:

277/23	395/33	204/23	120/20	19
--------	--------	--------	--------	----

(3) In order to achieve a damage level of 70% weapons/sorties required over target:

Weapon:	250# <u>SNAKEYE</u>	or	250# <u>BOMB</u>	or	500# <u>BOMB</u>	or	750# <u>BOMB</u>	
Area A	340/28		438/37		226/25		132/22	22
Area B	192/16		290/24		148/17		88/15	23
Area C	233/19		364/30		189/21		111/18	24
TOTALS:	765/63		1092/91		563/63		331/55	25

(4) Weapons/sorties operationally required to achieve "over target" requirement shown above:

933/77	1332/111	687/77	404/67	28
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15. PROBABILITY OF ACHIEVING DAMAGE CRITERIA: 50%.

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A-C-AG-3

Tab AG to
Annex C to
Appendix A

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 40 1
2. BE NUMBER: 617-0491 2
3. IDENTIFICATION: Phu Qui Ammunition Depot SW 3
4. DATE OF INFORMATION: 4 April 1965 4
DATE OF TIS: 24 June 1965 5
DATE OF PHOTOGRAPHY: 4 April 1965 6
DATE OF INTELLIGENCE REVIEW: 27 April 1965 7
5. LOCATION: 19-17-42N 105-23-02E, UTM WG 403335 8
(3.7NM SW of Phu Qui (Nghia Hung). 16NM NW of coastal 9
railway and 37NM SW of Thanh Hoa). 10
6. DESCRIPTION: This depot is spread over 410 acres 11
and is secured by a double row of fencing. Areas within 12
the target complex contain a total of 20 dispersed storage 13
buildings. There are also 2 support/barracks type buildings 14
and several smaller support/storage buildings and sheds. 15
Ammo storage capacity is estimated at approximately 7,110 16
metric tons. However, certain characteristics such as 17
camouflaging, heavy security, and minimum revetting indicate 18
storage of other than explosive munitions. The troop 19
capacity is estimated at 150 personnel. A possible under- 20
ground storage facility may be located under the wooded 21
ridge N of target area A. Entrances to this site appear as 22
cleared spaces on the NW slope, with road access to the target. 23
7. SIGNIFICANCE: Phu Qui Ammunition Depot, only 38NM NE 24
of the Laotian border, could provide support to the PL/VC, 25
using the Son Ca River for shipment of ammo from Phu Qui to 26
Lang Binh and Route 7 from there into Laos. The area is 27
relatively isolated from known military installations, being 28
closest to elements of 324th Brigade to the south. 29
8. TARGET ENVIRONMENT: The target is located in the 30
foothills of the Song Con River valley, with medium 31
cultivation and small civilian populated areas surrounding 32
it. It is one element of a military complex that comprises 33
an army barracks 3NM NW of the ammo depot, and an army 34
barracks/supply depot and supply depot within the town of 35
Phu Qui (Nghia Hung). 36
9. DEFENSE ENVIRONMENT: 37
 - a. There are 4 inactive 4-position AAA sites (suitable 38
for 14.5mm-37mm) located adjacent to the depot outside 39
the perimeter fence. There are also AW (probably 12.7mm 40
and lighter) positions in the adjacent peripheral area. 41
(DOI: 4 April 1965) 42
 - b. The 120th Infantry Regiment has been reported in the 43
Nghia Hung area. A military area, capable of housing 44
3,500 troops, is located 3NM northeast of the target. 45
 - c. No known radar is located in the target area. EW 46
coverage is best provided by Cap Falaise, Phu Dieu Chau, 47
and Anh Son radars. 48

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A-C-AI-2

Tab AI to
Annex C to
Appendix A

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10. DAMAGE OBJECTIVE: Destruction of stored ammunition. Damage criterion is one hit per storage structure with accompanying damage to stored ammunition. Damage level is 30 per cent.

11. EFFECT ON DRV: Damage to this ammo depot will reduce the DRV's support to the PL/VC and also reduce the over-all effectiveness of the DRV military capability.

12. RECUPERABILITY: With a 30% destruction of facilities, normal operations using tented storage instead of buildings could be resumed in about 5 days. If there is general destruction in North Vietnam, it may take as long as 10 days to get back to normal operations using military personnel in the area for rebuilding. Ammunition could be replaced in an estimated 3-5 days.

13. COLLATERAL DAMAGE: Insignificant damage to surrounding area.

14. RECOMMENDED WEAPONS AND SORTIES:

This target is comprised of five areas. Weapons and sorties have been computed for each area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target are also shown:

(1) In order to achieve a damage level of 30%, weapons/sorties required over target:

WEAPON:	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	750# BOMB	
Area A	60/5		105/9		105/12		105/18	25
Area B	113/10		150/13		77/9		45/8	26
Area C	70/6		97/9		97/11		97/17	27
Area D	41/4		72/6		72/8		72/12	28
Area E	79/7		106/9		106/12		106/18	29
Totals	363/32		530/46		457/52		425/73	30

(2) Weapons/sorties operationally required to achieve "over target" requirement shown above:

443/37	647/54	558/62	519/87	33
--------	--------	--------	--------	----

(3) In order to achieve a damage level of 70%, weapons/sorties required over target:

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Appendix A

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WEAPON:	250# <u>SNAKEYE</u>	or	250# <u>BOMB</u>	or	500# <u>BOMB</u>	or	750# <u>BOMB</u>	
Area A	203/17		354/30		354/40		354/59	1
Area B	381/32		506/43		260/29		152/26	2
Area C	236/20		327/28		327/37		327/55	3
Area D	139/12		243/21		243/27		243/41	4
Area E	267/23		358/30		358/40		358/60	5
Totals	1226/104		1788/152		1542/173		1434/241	6
(4) Weapons/sorties operationally required to achieve "over target" requirement shown above:								7
	1496/125		2181/182		1881/209		1749/232	9
15. <u>PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL:</u> 50%								10

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A-C-AI-4

Tah AI to
Annex C to
Appendix A

(Revised by 6th Note to Holders - 25 March 1966)

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TAB AJ TO ANNEX C TO APPENDIX A

TARGET NO. 41



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DATE OF INTELLIGENCE REVIEW 1904 11 03

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A-C-AJ-1

Tab AJ to Annex C
in Appendix A

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 41 1
2. BE NUMBER: 617-0080 2
3. IDENTIFICATION: Phu Van Ammunition Depot East 3
4. DATE OF INFORMATION: 2 April 1965 4
DATE OF TIS: 20 December 1965 5
DATE OF PHOTOGRAPHY: 3 April 1965 6
DATE OF INTELLIGENCE REVIEW: 30 April 1965 7
5. LOCATION: 18-49-56N 105-18-44E, UTM WP 328819,
(22.5NM NW of Vinh, 4 NM SSE of Vinh Son, North Vietnam). 8
6. DESCRIPTION: A generally N-S oriented depot area almost
1 1/2 NM in length, with a median width of 250 yards. Depot
contains 7 (approximately 98' x 37') ammunition storage
buildings and 2 smaller storage/support buildings adequately
served by a secondary road network. Total estimated ammo
capacity of the 7 principal buildings is 3,268 M.T. There
are at least 3 other small buildings or sheds scattered in
the area. No barracks buildings associated with this
installation. (DOI: 3 April 1965) 10
11
12
13
14
15
16
17
18
7. SIGNIFICANCE: Ammunition depot is part of a large
military complex in the Vinh Son area serving the 324th
Infantry Brigade and located south of Route 7 between Routes
7 and 8, both of which are main avenues for North Vietnamese
support for operations in Laos. It is considered likely
that the first function of this depot is to service local
324th Brigade elements rather than to support the Laos
campaign. 19
20
21
22
23
24
25
26
8. TARGET ENVIRONMENT: Depot is located in the low,
rolling coastal lowland along the Song Ca (river). Area
is intensely cultivated with scattered civilian settlements.
Two small settled areas are located within 1/4 NM ENE and NW
of the depot. General area contains elements of the 324th
Infantry Brigade. 27
28
29
30
31
32
9. DEFENSE ENVIRONMENT: 33
 - a. There are 1 active and 2 inactive (57mm-85mm) AAA
sites (20 positions, 1 occupied) plus 2 unoccupied AW
positions in and adjacent to the target installation.
(DOI: 3 April 1965) 34
35
36
37
 - b. Local security/work forces probably number 50-75
persons. 38
39
 - c. Nearest EW radars are located at Anh Son and in the
Vinh area. 40
41
10. DAMAGE OBJECTIVE: Damage criterion is structural
damage to buildings and accompanying personnel casualties.
Damage level is 30%. 42
43
44
11. EFFECTS ON NVN: 30% damage to this depot would
probably reduce the immediate supply of the 324th Brigade.
It is not considered that such reduction would be critical. 45
46
47

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A-C-AJ-2

Tab A. to
Annex C to
Appendix

(continued by 2th Note to Holders)

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12. RECUPERABILITY: Temporary accommodations could be effected within 7 days.

13. COLLATERAL DAMAGE: Insignificant.

14. RECOMMENDED WEAPONS AND SORTIES:

This is a large target complex comprised of 3 areas. Weapons and sorties have been computed for each area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target are also shown:

(1) In order to achieve a damage level of 30% weapons/sorties required over target:

WEAPON:	250# <u>SNAKEYE</u>	or	250# <u>BOMB</u>	or	500# <u>BOMB</u>	or	750# <u>BOMB</u>	
Area A	82/7		104/8		104/12		104/17	12
Area B	13/1		32/3		32/4		32/5	13
Area C	4/1		18/2		18/2		18/3	14
Totals	99/9		154/13		154/18		154/25	15

(2) Weapons/sorties operationally required to achieve "over target" requirement shown above:

118/11	190/16	190/22	190/30	18
--------	--------	--------	--------	----

(3) In order to achieve a damage level of 70% weapons/sorties required over target:

WEAPON:	250# <u>SNAKEYE</u>	or	250# <u>BOMB</u>	or	500# <u>BOMB</u>	or	750# <u>BOMB</u>	
Area A	277/23		350/29		350/39		350/58	21
Area B	44/4		108/9		108/12		108/18	22
Area C	14/1		61/5		61/7		61/10	23
Totals	355/28		519/43		519/58		519/86	24

(4) Weapons/sorties operationally required to achieve "over target" requirement shown above:

435/38	630/52	630/71	630/80	27
--------	--------	--------	--------	----

15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%

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(Revised by 6th Note to Holders - 25 March 1966)

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TAB AK TO ANNEX C TO APPENDIX A

TARGET NO. 42



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A-C-AK-1

1. *Int. J. Pharm.* 1990; 67: 1-10.

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 42 1
2. BE NUMBER: 617-0953 2
3. IDENTIFICATION: Phu Van POL Storage 3
4. DATE OF INFORMATION: 29 October 1965 4
DATE OF TIS: 10 May 1966 5
DATE OF PHOTOGRAPHY: 29 October 1965 6
DATE OF INTELLIGENCE REVIEW: 27 November 1965 7
5. LOCATION: 18-50-55N 105-19-40E, UTM WF 323827 8
6. DESCRIPTION: The target area contains about 14 partially underground, 9
vented bunkers, dispersed in a random pattern in the terrain. There are two 10
principal support buildings. The target area is concealed with heavy vegetation 11
and is road served. 12
7. SIGNIFICANCE: The capacity at this POL site is 1,000 MT. The site 13
is strategically placed to support Viet Cong and Pathet Lao forces drawing 14
supplies from this area, as well as regular North Vietnamese forces based at 15
Phu Van. 16
8. TARGET ENVIRONMENT: The target is about 100 feet above sea level, 17
on the lower slopes of an extremely dissected, brush-and-shrub-covered hill, 18
1.5 nautical miles east-northeast of Phu Van. Very low brush-and-shrub- 19
covered hills separated by terraced, rice-cultivated valleys extend 0.6 nautical 20
miles east, 1.3 nautical miles south, and 1.0 nautical miles southwest of the 21
target. Many scattered, compact villages are in the general vicinity 22
9. DEFENSE ENVIRONMENT: 23
 - a. No SAM sites have been identified within 30 nm of this target, 24
however, aircrews have reported sighting airborne missiles within 10 nm 25
of this location. 26
 - b. AAA activity identified in the Phu Van/Vinh Son area includes 10 27
active sites, containing 26 occupied 37mm revetments and 13 occupied 28
57mm/85mm revetments. (DOI: 18 September 1965 - 28 March 1966) 29
 - c. Moderate small arms and HMG fire may be expected from local 30
security forces and militia units. 31
10. DAMAGE OBJECTIVE: Destruction of POL stored. Damage criterion 32
is rupture of storage tanks and distortion of exposed piping and equipment. 33
Firing of spilled contents will enhance disability. 34
11. EFFECT ON NVN: Loss of storage capability and POL stocks would 35
eliminate a resupply point for North Vietnamese regulars, Viet Cong and 36
Pathet Lao forces. 37

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12. RECUPERABILITY: Restoration of this target to full pre-strike capability would require several months. North Vietnam is not known to be manufacturing tank components, steel tubing, piping, pumps, or other items basic to the construction or maintenance of POL storage facilities. The existing reliance on imported materials and skilled labor is expected to continue indefinitely.

13. COLLATERAL DAMAGE:

a. Insignificant

b. Population

Casualties*

Target Area		Adjacent Area		Target Area		Adjacent Area	
Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ
50	40	0	90	3	2	0	1

* Casualties estimated under daylight alert conditions.

14. RECOMMENDED WEAPONS AND SORTIES:

a. In order to achieve a damage level of 30%, weapons/sorties required over target:

WEAPON	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	750# BOMB
	42/4		74/6		74/8		74/12

b. Weapons/sorties operationally required to achieve "over target" requirements shown above:

51/4	90/8	90/10	90/15
------	------	-------	-------

c. In order to achieve a damage level of 70%, weapons/sorties required over target:

WEAPON	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	750# BOMB
	142/12		250/21		250/28		250/42

d. Weapons/sorties operationally required to achieve "over target" requirements shown above:

173/14	305/25	305/34	305/51
--------	--------	--------	--------

15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%

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A-C-AK-3

Tab AK to
Annex C to
Appendix A

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TAB AL TO ANNEX C TO APPENDIX A

TARGET NO. 43



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A-C-AL-1

Tab AL to Annex C
to Appendix A

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 43 1
2. BE NUMBER: 616-0249 2
3. IDENTIFICATION: Qui Hau Ammunition Depot West 3
4. DATE OF INFORMATION: 4 July 1965 4
DATE OF TIS: 15 July 1965 5
5. LOCATION: 20-38-06N/105-14-32E, UTM WH 253814 (1 NM NW of Hoi Ha, 13 NM SW of Hoa Binh). 6
7
6. DESCRIPTION: This ammunition storage area is double-fenced and covers over 200 acres. There are 24 probable earth-revetted storage buildings in the site with an estimated storage capacity of 11,500 metric tons. Associated with the depot are 3 barracks and 8 to 12 support-type buildings. Guard posts are evident on three sides of the site. 8
9
10
11
12
13
7. SIGNIFICANCE: Since this depot is only about 35 NM from the Laos border, it could provide support to PL efforts via Route 6, just 8 NM north. This depot also probably supports the ammunition depots in the southern part of North Vietnam. 14
15
16
17
18
8. TARGET ENVIRONMENT: This depot is built into a hilly wooded area on the edge of a cultivated portion of the Song Cai valley. There is a small probable civilian settlement abutting the depot on the north and several villages across the river and some distance away. 19
20
21
22
23
9. DEFENSE ENVIRONMENT: No AAA sites are identified in the immediate vicinity of the target, however, some trenching and AW sites are in evidence. Nearest radar is located at Tam Dinh, where early warning and fire control radars are confirmed. 24
25
26
27
28
10. DAMAGE OBJECTIVE: Destruction of stored ammunition. Damage criterion is structural damage to storage buildings and accompanying destruction of stored ammunition. Damage level is 30 percent. 29
30
31
32
11. EFFECT ON NVN Support to the PL would be disrupted and resupply to ammunition depots to the south would be curtailed. 33
34
35
12. RECUPERABILITY: With 30% destruction of facilities, it may take as long as 8-10 days to get back to normal operations. Ammunition could be replaced in an estimated 3-5 days if priorities exist. 36
37
38
39
13. COLLATERAL DAMAGE: Insignificant. 40

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14. RECOMMENDED WEAPONS AND SORTIES:

a. In order to achieve the damage level of 30%
weapons/sorties required over target:

Weapon: 250# 250# 500# 750#
 SNAKEYE or BOMB or BOMB or BOMB
 480/40 540/45 540/60 540/90

b. Weapons/sorties operationally required to achieve
"over target" requirements shown above:

585/49 660/55 660/74 660/110

c. In order to achieve the damage level of 70%,
weapons/sorties required over target:

1620/135 1820/151 1820/202 1820/340

d. Weapons/sorties operationally required to achieve
"over target" requirements shown above:

1980/164 2220/184 2220/222 2220/372

15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%

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TAB AM TO ANNEX C TO APPENDIX A

TARGET NO. 44



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A-C-AM-1

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 44 1
2. BE NUMBER: 616-0146 2
3. IDENTIFICATION: Yen Bai Ordnance Depot 3
4. DATE OF INFORMATION: 2 July 1965 DATE OF TIS: 4
20 June 1966 5
5. LOCATION: 21-42-32N 104-52-58E, UTM VK880005, 21 NM 6
NW of Phu Tho; 58 NM NE of Son La. 7
6. DESCRIPTION: This depot consists of four target areas and 8
contains approximately 200 buildings including 9 HQ/Adminis- 9
tration buildings, 52 barracks, 48 storage buildings, and 76 10
structures associated with ordnance storage, repair and prob- 11
ably assemblage. In addition, there are approximately 90 quar- 12
ters buildings, at least 50 small miscellaneous buildings and 13
numerous sheds cattered throughout the area. 14
7. SIGNIFICANCE: This target is a major ordnance supply 15
depot capable of serving the Hanoi complex or Military Region 16
Northwest across the Red River. Classes of stores handled 17
here are unknown. 18
8. TARGET ENVIRONMENT: This depot is located toward the 19
center of a tongue of land created by a double bend in the 20
Red River. The town of Yen Bai lies along the shore of the 21
river. The surrounding territory is mixed farm land and low 22
wooded hills. 23
9. DEFENSE ENVIRONMENT: No AAA sites are known to be in 24
the vicinity of the target nor is there any evidence of AW 25
defenses. No military units are known to be in this area: 26
the closest is the 305th Infantry Brigade in the area of Phu 27
Tho, southeast and along the Red River. The nearest radar 28
is the EW site at Thai Nguyen. The EW radar at Son La and EW/ 29
HF radar at Hanoi would also provide cover for this target. 30
10. DAMAGE OBJECTIVE: Destruction of stored ordnance. 31
Damage criterion is structural damage to storage buildings and 32
accompanying damage to stored ordnance. Damage level is 30 33
per cent. 34
11. EFFECT ON NVN: Damage to this target would temporarily 35
disrupt supply to the Hanoi military complex and Military 36
Region NW, and possibly reduce support to the VC/PL. 37
12. RECOVERABILITY: Limited depot operations could resume 38
within 2 to 3 days, assuming available military and civilian 39
labor is used to clear debris and erect temporary shelter. 40
Replacement of supplies could be effected within 24 hours if 41
diverted from the Yen Bai Ordnance Depot approximately 9 NM 42
to the southeast; however, if acquired from China, a week or 43
longer would be required. 44
13. COLLATERAL DAMAGE: Insignificant. 45
14. RECOMMENDED WEAPONS AND SORTIES: 46

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(Revised by 8th Note to Holders)

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a. This is a large target complex comprised of two areas. Weapons and sorties have been computed for each area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target is also shown.

(1) In order to achieve a damage level of 30%, weapons/sorties required over target:

WEAPON	250# <u>SNAKEYE</u>	or	250# <u>BOMB</u>	or	500# <u>BOMB</u>	or	750# <u>BOMB</u>	
Area A	55/5		74/6		38/4		22/4	8
Area B	26/2		52/4		27/3		16/3	9
Totals	81/7		126/10		65/7		38/7	10

(2) Weapons/sorties operationally required to achieve "over target" requirement shown above:

99/9	154/12	79/9	46/9	13
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(3) In order to achieve a damage level of 70%, weapons/sorties required over target:

WEAPON	250# <u>SNAKEYE</u>	or	250# <u>BOMB</u>	or	500# <u>BOMB</u>	or	750# <u>BOMB</u>	
Area A	185/15		200/21		128/14		75/13	16
Area B	88/7		176/15		92/10		54/9	17
Totals	273/22		426/36		220/24		129/22	18

(4) Weapons/sorties operationally required to achieve "over target" requirement shown above:

333/27	520/44	268/29	157/27	21
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15. PROBABILITY OF ACHIEVING DAMAGE CRITERION: 50% 22

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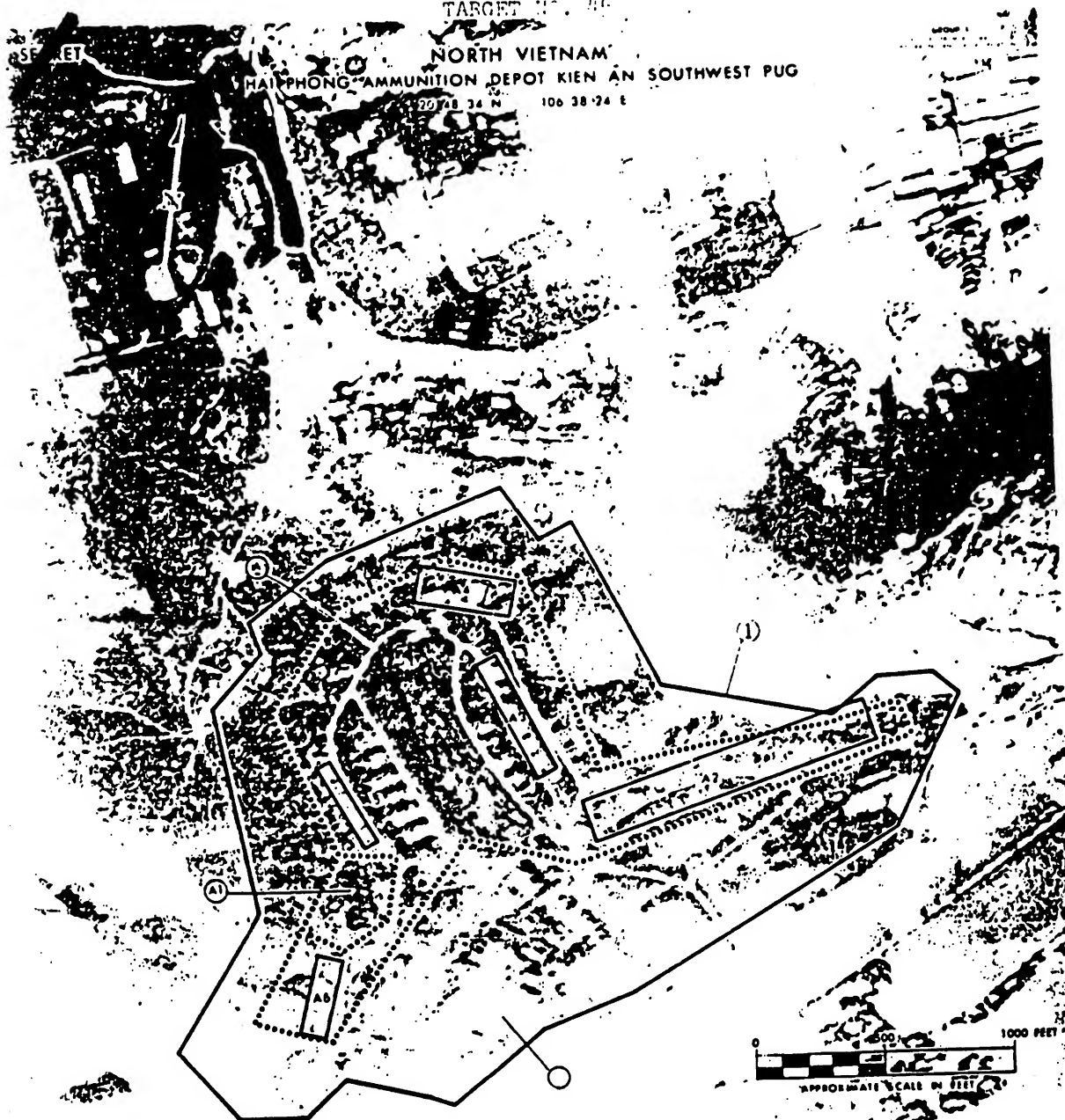
TAB AN TO ANNEX C TO APPENDIX A

TARGET NO. 45

NORTH VIETNAM

HAI PHONG AMMUNITION DEPOT KIEN AN SOUTHWEST PUG

22 48 34 N 106 38 24 E



1 JCS 45,

A AMMUNITION STORAGE AREA:

CONTAINS 43 REVETTED AMMUNITION

STORAGE BUILDINGS, AND 18 REVETMENTS

A1 UNDERGROUND STORAGE AREA, 4 CAVE ENTRANCES

A2, A3, A4, A5 AND A6, WEAPONERED AREAS

B SUPPORT AREA: CONTAINS 14 SUPPORT BUILDINGS

JCS 45

BE 0616.00061

DATE OF PHOTO, 9 APRIL 1967

SCALE: APPROX 1:6000

DATE OF INTELLIGENCE REVIEW: 22 OCTOBER 1968

PHOTO REFERENCE: 850522/L2 230

NO FOREIGN DISSEM

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A-C-AN-1

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 45 1
2. B. E. NUMBER: 616-0061 2
3. IDENTIFICATION: Hai Phong Ammunition Depot Kien An SW PUG 3
4. DATE OF INFORMATION: 22 October 1968 4
DATE OF TISD: 31 January 1969 5
DATE OF PHOTOGRAPHY: 9 April 1967 6
DATE OF INTELLIGENCE REVIEW: 22 October 1968 7
5. LOCATION: 20-48-34N 106-38-24E, 0.5 NM NE of Kien An, 4 NM SE of the Lach Tray (River), 4 NM SW of Hai Phong. 8
9
6. DESCRIPTION: This depot, a fenced area of about 90 acres, is served by an internal road network and has access to the Hai Phong Kien An road. The depot contains an aggregate of 43 revetted ammunition storage buildings. There are 4 caves within the enclosure, but functions and dimensions are undeterminable. Approximately 14 support buildings are associated with the storage complex. There are 18 unoccupied revetments in the NW part of the facility. Estimated storage capacity of this depot is 10,000 metric tons. 10
11
12
13
14
15
16
17
7. SIGNIFICANCE: This is the major ammunition supply depot for ground forces and airfields in the Hai Phong area. 18
19
8. TARGET ENVIRONMENT: This depot is located just E of Kien An Airfield and S of the Lach Tray (River), one of the numerous Red River tributaries. The storage facilities are dispersed over an area of hills and steep ravines. Numerous civilian settlements are in the vicinity of the target. 20
21
22
23
24
9. DEFENSE ENVIRONMENT: 25
 - a. The target is within the SAM envelope. 26
 - b. AAA activity has been identified within 3NM of the target. 27
 - c. HMG and small arms fire is anticipated. 28
10. DAMAGE OBJECTIVE: Destruction of stored ammunition. 29
Damage criterion is structural damage to the storage buildings, with accompanying casualties to personnel and loss of stored ammunition. 30
Damage level is 30%. 31
32
11. EFFECT ON NVN: Destruction of this depot would temporarily deny support to the ground forces in the Hai Phong area and necessitate diversion of the Ha Noi military complex ammunition supplies to this area. 33
34
35

~~SECRET~~ NO FOREIGN DISSEM EXCLUDED FROM AUTOMATIC DOWNGRADING
A-C-AN-2

(Revised by 16th Note to Holders)

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12. RECUPERABILITY: If this target is 30% destroyed, limited operations could be resumed within 36 hours, since there is ample space and empty revetments for temporary storage under canvas. Transportation routes are good between other ammunition depots and Ha Noi, and from Ha Noi to Hai Phong; therefore, replacement of destroyed stocks could be accomplished within 2 to 3 days.

13. COLLATERAL DAMAGE:

a. None

b. Population				Casualties*			
Target Area		Adjacent Area		Target Area		Adjacent Area	
Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ
150	0	50	0	9	0	1	0

*Casualties estimated under daylight alert conditions.

14. RECOMMENDED WEAPONS AND SORTIES:

This depot is comprised of 2 areas. One area (with 5 sub-areas) has been delineated for weapons application. Weapons and sorties have been computed for each sub-area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target are also shown:

(1) In order to achieve a damage level of 30%, weapons/sorties required over target:

Weapon:	250# <u>SNAKEYE</u> or	500# <u>SNAKEYE</u> or	500# <u>BOMB</u> or	750# <u>BOMB</u>
Area A-2 (1145' x 160')	217/18	217/24	490/54	490/82
Area A-3 (490' x 85')	24/2	24/3	76/8	76/13
Area A-4 (370' x 140')	9/1	9/1	21/2	21/4
Area A-5 (350' x 55')	27/2	27/3	97/11	97/16
Area A-6 (305' x 100')	10/1	10/1	30/3	30/5
Totals:	287/24	287/32	714/78	714/120

(2) Weapons/sorties operationally required to achieve "over target" requirements shown above:

Totals:	345/29	345/38	857/95	857/143
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(Revised by 16th Note to Holders)

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(3) In order to achieve a damage level of 70%, weapons/sorties required over target:

Weapon:	250# <u>SNAKEYE</u>	500# <u>SNAKEYE</u> or	500# <u>BOMB</u> or	750# <u>BOMB</u>	
Area A-2	732/61	732/81	1654/184	1654/276	5
Area A-3	81/7	81/9	256/28	256/43	6
Area A-4	28/2	28/3	70/8	70/12	7
Area A-5	89/7	89/10	325/36	325/54	8
Area A-6	33/3	33/4	101/11	101/17	9
Totals:	963/80	963/107	2406/267	2406/402	10

(4) Weapons/sorties operationally required to achieve "over target" requirements shown above:

Totals:	1156/96	1156/128	2888/321	2888/481	11
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15. PROBABILITY OF ACHIEVING DESIRED DAMAGE: LEVEL: 50%

~~SECRET~~

A-C-AN-4

(Revised by 16th Note to Holders)

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Annex C to
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TAB AO TO ANNEX C TO APPENDIX A

TARGET NO. 46



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to Appendix A

RV-2

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 46 1
2. BE NUMBER: 616-0476 2
3. IDENTIFICATION: Ban Phieng Hay Ammunition Depot 3
4. DATE OF INFORMATION: 30 January 1965 4
DATE OF TIS: 20 Aug 1965 5
5. LOCATION: 21-23-50N/103-56-20E, UTM W 902662. Approx- 6
imately 4 NM north of Son La on the east side of the route 7
connecting Son La with the Black River. 8
6. DESCRIPTION: This depot contains 14 semi-revetted 9
storage buildings, an administrator/quarters-type building, 10
1 support and 1 non-explosive building. Its internal road 11
system is a loop connected to the main Son La-Black River 12
road by its own feeder route (about 400 yards long). The 13
estimated storage capacity is approximately 1,500 metric tons. 14
7. SIGNIFICANCE: This target probably supports ammunition 15
requirements for the Military Region Northwest Headquarters 16
at Son La and PAVN troops in this area. 17
8. TARGET ENVIRONMENT: The depot is located southeast of 18
the Nam Bu River in a wooded hilly area. The southern 19
boundary of the installation abuts a cleared and cultivated 20
area. Small civilian settlements are located along the road 21
to the west and north of the installation. The closest 22
village is Ban Phieng Hay, about 1/2 mile distant. Also to 23
the west is a small barracks and storage installation which 24
probably houses personnel operating the ammunition depot. 25
9. DEFENSE ENVIRONMENT: There is no known AAA in the 26
vicinity of the target area and no ground defense is evident. 27
The closest AAA sites are located in the vicinity of Son La 28
and comprise 3 active light AAA sites, 2 of which are 4-posi- 29
tion and one 6-position, all occupied. The nearest early 30
warning radar (RUS-2) is at Son La. 31
10. DAMAGE OBJECTIVE: Destruction of stored ammunition. 32
Damage criterion is structural damage to storage buildings 33
with accompanying damage to stored ammunition. 34
11. EFFECT ON DRV: Damage to this ammunition depot would 35
reduce support to the nearby Military Region Hq and curtail 36
supply to PAVN units in this general area. 37
12. RECUPERABILITY: Limited depot operations could probably 38
be restored within 24 hours after incurrence of damage since 39
there is ample space for temporary storage under canvas. 40
Replacement of destroyed stocks could be accomplished within 41
36 hours if acquired from the large depot at Ban Nuoc Chieu. 42
If acquired from depots in the east or from China, 7 to 10 43
days would be required. 44

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13. COLLATERAL DAMAGE: Insignificant.

14. RECOMMENDED WEAPONS AND SORTIES:

a. This is a large target complex comprised of four areas. Weapons and sorties have been computed for each area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target is also shown.

(1) In order to achieve a damage level of 30% weapons/sorties required over target:

Weapon:	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	750# BOMB	
Area A	24/2		91/8		91/11		91/16	10
Area B	16/2		54/5		54/6		54/9	11
Area C	17/2		63/6		63/7		63/11	12
Area D	17/2		63/6		63/7		63/11	13
TOTALS:	74/7		271/23		271/31		271/46	14

(2) Weapons/sorties operationally required to achieve "over target" requirement shown above:

98/9 330/28 330/38 330/56 17

(3) In order to achieve a damage level of 70% weapons/sorties required over target:

Weapon:	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	750# BOMB	
Area A	74/7		306/26		306/34		306/26	20
Area B	54/5		183/16		183/21		183/31	21
Area C	58/5		212/18		212/24		212/36	22
Area D	58/5		212/18		212/24		212/36	23
TOTALS:	244/21		913/77		913/102		913/153	24

(4) Weapons/sorties operationally required to achieve "over target" requirement shown above:

298/26 1113/94 1113/124 1113/187 27

15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%. 28

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TAB AP TO ANNEX C TO APPENDIX A

TARGET NO. 47



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A-C-AP-1

Tab AP to Annex C
to Appendix A

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 47 1
2. BE NUMBER: 616-0555 2
3. IDENTIFICATION: Yen Son Ord and Ammo Depot 3
4. DATE OF INFORMATION: 10 May 1965 DATE OF TIS: 15 July 1965 4
5
5. LOCATION: 21-35-40N 104-59-10E, UTM VJ 985878 (1 NM N of Yen Son, 1 NM W of Thanh Huong, 9 NM SE of Yen Bai). 6
7
6. DESCRIPTION: The ammunition depot covers about 60 acres. It has a fenced explosive storage area served by good internal roads which contains 25 ammo storage buildings (289,000 sq ft), and 12 support buildings. At the time of photography 57 probable cargo trucks were observed. The support area contains 10 buildings; these are 4 barracks (9,200 sq ft), 1 administration building, 2 support buildings, and 1 vehicle shed. 8
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12
13
14
15
7. SIGNIFICANCE: Yen Son Ammunition Depot is the major ammunition depot in the northwest part of North Vietnam. Since it is just north of the Hanoi-Lao Cai Railroad line, it also provides support to the northern Red River Delta area above Hanoi. The significance of this rail line may indicate, as well, that this depot has a role in China-North Vietnam supply arrangements. 16
17
18
19
20
21
22
8. TARGET ENVIRONMENT: The depot is in the foothills north of the Red River about 1 NM NE of the Hanoi-Lao Cai Railroad line. There are lightly cultivated areas and small civilian villages near the depot. The Tai Xouan Ammunition Depot is 12 NM NE of Yen Son, and the Yen Bai Ordnance Depot is 9 NM NE. 23
24
25
26
27
28
9. DEFENSE ENVIRONMENT: No AAA defenses are known to be in the vicinity of this target. There are vehicle revetments, trenching and AW positions inside the secured area and additional trenching and AW positions at the north, northwest and south of the depot, outside the secured area. This target lies within the capabilities of HF/EW radar at Hanoi. 29
30
31
32
33
34
10. DAMAGE OBJECTIVE: Destruction of stored ammunition. Damage criterion is structural damage to storage buildings with accompanying damage to stored ammunition. Damage level is 30%. 35
36
37
38
11. EFFECT ON NVN: This may be a base ammo depot receiving supplies directly from China via Lao Cai. Destruction would reduce support to Pathet Laos via Dien Bien Phu and South Vietnam via Moc Chau. 39
40
41
42
12. RECUPERABILITY: Not more than 3-5 days would be needed to resume limited operation. However, if general destruction is inflicted throughout the country it may be 10-15 days before operations can be resumed. 43
44
45
46
13. COLLATERAL DAMAGE: Insignificant. 47

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A-C-AP-2

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14. RECOMMENDED WEAPONS AND SORTIES:

a. This is a large target complex comprised of five areas. Weapons and sorties have been computed for each area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target is also shown.

(1) In order to achieve a damage level of 30%, weapons/sorties required over target:

Weapon:	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	750# BOMB	
Area A	266/22		319/27		163/18		99/17	9
Area B	356/30		390/33		200/22		117/20	10
Area C	50/4		77/6		39/4		23/4	11
Area D	24/2		49/4		25/3		15/3	12
Area E	32/3		63/5		32/4		19/3	13
Totals:	728/61		898/75		459/51		273/46	14

(2) Weapons/sorties operationally required to achieve "over target" requirement shown above:

888/74	1095/91	560/62	333/56	15
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(3) In order to achieve a damage level of 70%, weapons/sorties required over target:

Weapon:	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	750# BOMB	
Area A	897/75		1076/90		540/60		334/55	20
Area B	1200/100		1310/109		673/75		394/65	21
Area C	169/14		260/22		132/15		78/13	22
Area D	81/7		165/14		85/9		51/9	23
Area E	108/9		212/18		108/12		64/11	24
Totals:	2455/205		3023/252		1538/171		921/154	25

(4) Weapons/sorties operationally required to achieve "over target" requirement shown above:

2994/250	3687/307	1876/209	1123/188	26
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15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%

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TAB AQ TO ANNEX C TO APPENDIX A

TARGET NO. 47.1



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A-C-AQ-1

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to Appendix A

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 47.1 1
2. BE NUMBER: 616-0651 2
3. IDENTIFICATION: Yen Khoai Army Barracks and Ammo Storage 3
4
4. DATE OF INFORMATION: 14 July 1966 5
DATE OF TIS: 20 June 1966 6
5. LOCATION: 21-09-58N/105-22-58E, UTM WJ 397404, 7.2 NM west of Son Tay, 27.5 NM WNW of Hanoi. 7
8
6. DESCRIPTION: Target is a military complex consisting of an ammo storage area, a probable support area and a barracks area capable of housing an artillery regiment and support troops. A large training area is just north of the barracks. The barracks area includes an administration building, mess halls, 12 storage/support type buildings, 22 barracks-type buildings, some probable ammo storage sheds and other small support buildings. To the west is a fenced area of approximately 20 acres containing 9 revetted buildings probably used for ammo storage. There are a few other small support buildings in the area and what appear to be guard towers around the fenced perimeter. NE of the barracks area is an area of 19 barracks/support/storage type buildings, one mess hall, and other small buildings. This may be a training school or a support area. To the NW are other small groups of buildings that appear related to training. 9
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7. SIGNIFICANCE: Artillery units, including artillery schools have long been carried in the Son Tay area. This appears to be a well developed artillery training area with at least a regiment stationed here. Ammo storage area has a capacity of 1000 - 1300 tons. 25
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8. TARGET ENVIRONMENT: Target is located about 4 NM equidistant between the Red River to the NE and the Black River to the NW where these rivers join forming a hairpin turn. Target is at the edge of flat farming bottom land between the rivers and at the edge of a recently developed reservoir. It is at the edge of wooded higher elevations rising to approximately 4,100 ft 7 NM S. Across the Black River are ridges of 1250 ft 8 NM west and 3400 ft 11 NM southwest. Flat deltaic terrain extends easterly to the coast and low elevations for several miles north to the Claire River. 30
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9. DEFENSE ENVIRONMENT: 40
 - a. Eleven SAM sites have been identified within SA-2 missile range (17.5 NM) of this target and 11 additional sites are 18-30 NM distant. 41
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 - b. Identified AAA activity in the Yen Khoai area includes 10 sites (72 revetments) which have most recently been reported as inactive (unoccupied). 44
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 - c. Moderate to intense HMG and small arms fire could be anticipated were troops still present in the area. The target has, however, been considered inactive since air strikes in September 1965. 47
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10. DAMAGE OBJECTIVE: Destruction of buildings and storage
ammo with accompanying casualties to personnel. Damage
criterion is structural damage to ammo storage area and admini-
stration, storage/support and barracks buildings.

11. EFFECT ON NVN: Will reduce effectiveness of artillery
officer and NCO training in NVN and affect artillery personnel
support to Viet Cong and Pathet Lao. Will reduce capability
of artillery defense.

12. RECUPERABILITY: Assuming 30% destruction, normal opera-
tions using tentage could be resumed in 24 - 48 hours.
Replacement of ammo might take from 2 to 5 days.

13. COLLATERAL DAMAGE: Insignificant.

14. RECOMMENDED WEAPONS AND SORTIES:

a. This is a large target complex comprised of four
areas. Weapons and sorties have been computed for each
area. To show the effort required to achieve the damage
level prescribed, total weapons/sorties required over the
target is also shown.

(1) In order to achieve a damage level of 30%
weapons/sorties required over target:

Weapon:	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	750# BOMB
Area A	152/12		210/18		210/23		210/35
Area B	34/3		103/9		103/11		103/17
Area C	164/14		207/17		106/12		63/11
Area D	72/6		100/8		52/6		31/5
TOTALS:	422/35		620/48		471/52		407/68

(2) Weapons/sorties operationally required to achieve
"over target" requirement shown above:

515/43	756/59	574/63	496/83
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(3) In order to achieve a damage level of 70%
weapons/sorties required over target:

Weapon:	250# <u>SNAKEYE</u>	or	250# <u>BOMB</u>	or	500# <u>BOMB</u>	or	750# <u>BOMB</u>
Area A	513/43		708/59		708/79		708/118
Area B	115/10		348/29		348/39		348/58
Area C	555/46		700/58		359/40		212/35
Area D	242/20		337/28		175/19		105/18
TOTALS:	1425/119		2093/174		1590/177		1373/229

(4) Weapons/sorties operationally required to achieve
"over target" requirement shown above:

1737/145 2552/212 1939/216 1674/279

15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%

~~TOP SECRET~~

A-C-AQ-4

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Appendix A

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TAB AR IN ANNEX C TO APPENDIX A

TARGET NO. 37.11

North Vietnam

HEAD AND SHOULDERS

1968-1969



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A-C-AR-1

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to Appendix A

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 47.11 1
2. BE NUMBER: 0616-00431 2
3. IDENTIFICATION: Hoai An Ammunition Depot 3
4. DATE OF INFORMATION: 13 November 1964 4
DATE OF TIS: 22 March 1965 5
5. LOCATION: 20-25-57N/105-32-45E, UTM WH 571592 6
6. DESCRIPTION: This depot is dispersed over approximately one square mile and is enclosed by a security fence with sentry houses and small support buildings located at regular intervals. There are 11 large ammunition storage buildings in the complex, 6 in Area A and 5 in Area B. These storage buildings have an estimated storage capacity of approximately 8200 M.T. There are three small revetted support buildings to the south and west of Area B. A probable sentry barracks is also located inside the secured area near the depot exit. This building could house up to 175 troops. Outside and to the south west of the secured area is a barracks and support facility containing 2 administrative buildings, 3 support buildings and 2 barracks-type structures. The barracks have a capacity of up to 145 troops. 7
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7. SIGNIFICANCE: This depot may well provide the major ammo storage for the 304th Infantry Division located throughout the Ninh Binh area. It is about equidistant (25 NM) between route 1 and route 6 and can support PL/VC operations over these routes. 21
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8. TARGET ENVIRONMENT: Target is located in a hilly area and is surrounded on three sides by heavy woods. To the west of the installation is a cultivated area and a small village. 26
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9. DEFENSE ENVIRONMENT: No known AAA defenses are located in the target area. Prepared AW positions are evident in the target area. Nearest radar is located at Naui Dinh, where early warning and fire control radars are confirmed. 29
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10. DAMAGE OBJECTIVE: Destruction of stored materials. Damage criterion is structural damage to storage buildings and accompanying destruction of stored ammunition. Damage level is 30%. 33
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11. EFFECT ON DRV: Disruption of ammo support to major PAVN unit (304th Div) as well as support to VC/PL infiltrators. 37
38
12. RECUPERABILITY: With 30% destruction of facilities it may take as long as 8-10 days to get back to normal operations. Ammunition could be replaced in an estimated 3-5 days if priorities exist. Using tented storage instead of buildings operations could be resumed in about 5 days. If there is general destruction on the DRV it may take as long as 10 days, using military personnel for rebuilding. 39
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Appendix A

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13. COLLATERAL DAMAGE: Insignificant. 1

14. RECOMMENDED WEAPONS AND SORTIES: 2

a. This is a large target complex comprised of two 3
areas. Weapons and sorties have been computed for each 4
area. To show the effort required to achieve the damage 5
level prescribed, total weapons/sorties required over 6
the target is also shown. 7

(1) In order to achieve a damage level of 30% weapons/ 8
sorties required over target: 9

Weapon:	250# <u>SNAKEYE</u>	or	250# <u>BOMB</u>	or	500# <u>BOMB</u>	or	750# <u>BOMB</u>	
Area A	80/7		98/8		98/11		98/16	10
Area B	65/5		83/7		83/9		83/14	11
Totals	145/12		181/15		181/20		181/30	12

(2) Weapons/sorties operationally required to achieve 13
"over target" requirement shown above: 14

177/15 210/18 210/24 210/36 15

(3) In order to achieve a damage level of 70% 16
weapons/sorties required over target: 17

Weapon:	250# <u>SNAKEYE</u>	or	250# <u>BOMB</u>	or	500# <u>BOMB</u>	or	750# <u>BOMB</u>	
Area A	270/22		330/28		330/37		330/55	18
Area B	212/18		280/23		280/31		280/46	19
Totals	482/40		610/51		610/68		610/101	20

(4) Weapons/sorties operationally required to achieve 21
"over target" requirement shown above: 22

585/49 745/62 745/83 745/123 23

15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%. 24

~~TOP SECRET~~

A-C-AR-3

Tab AR to
Annex C to
Appendix A

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NORTH VIETNAM

LARGE HQT BASED AT 10014100
2445 07 12 10014100



- 1. JC: 47 12
- A. AMMO STORAGE AREA CONTAINS PREVIOUSLY KNOWN
- A.1. WEAPONERED AREA
- A.2. WEAPONERED AREA
- B. AMMO STORAGE AREA CONTAINS PREVIOUSLY KNOWN
- B.1. POSSIBLE CAVE ENTRANCES AND SUPPORT BUILDING
- B.1. B.2. B.3. WEAPONERED AREA
- C. SUPPORT ADMIN AREA CONTAINS
- C.1. POSSIBLE SECURITY BUILDING AND

REF: 001600032
DATE OF PHOTO: 10 MAY 1968
SCALE: VARIABLE
DATE OF INTERVIEW: 10 OCTOBER 1968
PHOTO REFERENCE: LEON 7 111 1524

SECRET

NO FOREIGN DISSEM

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 47.12
2. P.R. NUMBER: 616-00323
3. IDENTIFICATION: Lang Het Ammunition Depot
4. DATE OF INFORMATION: 1 October 1968
DATE OF FIELD: 29 January 1969
DATE OF PHOTOGRAPHY: 10 May 1968
DATE OF INTELLIGENCE REVIEW: 10 October 1968

5. LOCATION: 21-32-47N 106-14-18E, located 9.0 KM NW of Kep, 10.0 KM NW of Lang Het on Route 1A, the main Ho Chi Minh Sea road in North Vietnam.

6. DESCRIPTION: This ammunition depot consists of 12 revetted storage buildings oriented generally in a NE-SW axis. The area appears to be fenced/divided into 3 areas. There are 4 revetted buildings in Area A and 9 in Area B. Estimated storage capacity is 4700 MT. Area C contains 4 support buildings, a possible security building, and an administration building.

7. SIGNIFICANCE: The ammunition depot could provide logistical support to troops at Kep, Bao Giang and Thai Nguyen. This facility, well off road served, is far enough from urban areas to make it ideally suited for storing explosives from Communist China.

8. TARGET ENVIRONMENT: The ammunition depot is located at the mouth of the Lang Het a small area of 20 KM NW of Ha Noi. Hills to the E and W sides form a natural plant confinement for the ammunition depot. The area is fairly flat and wooded with heavy vegetation along the stream bed of the depot. There are no urban areas near the ammunition depot. Kep Airfield is 10 KM S of the depot, and elements of the North Inf Div are located S of the depot on Route 1A to Ha Noi. Within the target, steep ridges form a natural environment for caves.

9. DEFENSE ENVIRONMENT:

- a. The target is within the SAM envelope.
- b. AAA activity has been identified within 3 KM of the target.
- c. HMX and small arms fire is not anticipated.

10. DAMAGE OBJECTIVE: Destruction of stored ammunition. Damage criterion is structural damage to storage buildings with accompanying damage to stored ammunition.

11. EFFECT ON NVN: Destruction of stored ammunition and storage facilities would delay re-supplying ammunition stocks to damaged ammunition depots further S and would also eliminate secure storage of new stocks coming in by rail from Communist China. Supply for troops in this general area would also be curtailed.

~~SECRET~~ NO FOREIGN DISSEM EXCLUDED FROM AUTOMATIC DOWNGRADING

A-C-AS-2

(Revised by 16th Note to Holders)

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12. RECOVERABILITY: It would take at least 2 to 3 days to clean up the damage and store ammunition under canvas in the open. The depot could start distributing ammunition within a day from undamaged buildings. As far as replenishing the lost ammunition goes, it would take at least 4 to 5 days to have ammunition shipped in from Communist China.

13. COLLATERAL DAMAGE:

Population				Casualties*			
Target Area		Adjacent Area		Target Area		Adjacent Area	
Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ
150	0	100	75	9	0	1	1

*Casualties estimated under daylight alert conditions.

14. RECOMMENDED WEAPONS AND SORTIES:

This target is comprised of 3 areas. Five sub-areas have been delineated for weapons application. Weapons and sorties have been computed for each sub-area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target are also shown:

(1) In order to achieve a damage level of 30%, weapons/sorties required over target:

WEAPON	500# SNAKEYE	750# BOMB
Area A-1 (575' x 90')	10/1	30/5
Area A-2 (1870' x 295')	60/7	95/16
Area B-1 (1520' x 90')	22/2	65/11
Area B-2 (1650' x 90')	24/3	70/12
Area B-3 (940' x 160')	20/2	45/8
TOTAL	136/15	305/52

(2) Weapons/sorties operationally required to achieve "over target" requirements shown above:

164/18 366/61

(3) In order to achieve a damage level of 70%, weapons/sorties required over target:

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(Revised by 16th Note to Holders)

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WEAPON	500// SNAKEYE	750// BOMB
Area A-1	32/11	99/17
Area A-2	202/22	320/53
Area B-1	73/8	219/37
Area B-2	79/9	236/39
Area B-3	67/7	152/25
TOTAL	453/50	1026/171

(4) Weapons/sorties operationally required to achieve "over target" requirements shown above:

544/60 1232/205

15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%.

~~SECRET~~

A-C-AS-4

(Revised by 16th Note to Holders)

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Appendix A

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TARGET NO. 47.13



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A-C-AT-1

Tab AT to Annex C
to Appendix A

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 47.13 1
 2. DE NUMBER: 616-0316 2
 3. IDENTIFICATION: Tai Youan Ammunition Depot SE 3
 4. DATE OF INFORMATION: 23 April 1964 4
DATE OF TIS: 15 February 1966 5
 5. LOCATION: 21-43-19N/105-08-00E, UTM 48Q WK 136024, 3
1 NM SE of Tai Xouan, 7.5 NM SW of Tuyen Quang, 20.3 NM NNW 7
of the Phu Tho on the Red River, and approximately 5 NM NW of 8
Route 2. 9
 6. DESCRIPTION: The ammunition depot covers an irregularly 10
shaped area of approximately 350 acres and is served by a net- 11
work of internal roads. The area is fenced and there are 2 12
guard stations, one at the NE and one at the SE ends. There 13
are 2 probable gate houses at the double fenced west entrance. 14
The complex contains five target areas. There are 4 ammuni- 15
tion storage buildings in Area A, 6 in Area B, 4 in Area C, 16
2 in Area D, and 4 in Area E. Southwest of Area C is a bar- 17
racks and support area containing 2 barracks/support-type 18
buildings, 2 gate houses, a probable vehicle shed, an adminis- 19
trative/headquarters buildings and one quarters building. The 20
quarters fall within target area "C". The estimated storage 21
capacity of this depot is approximately 7700 metric tons. The 22
barracks can house up to 300 troops. 23
 7. SIGNIFICANCE: This ammunition depot may support the 24
246th Inf Regt in the Tuyen Quang area and elements of the 25
305 Inf Brigade near Phu Tho. This depot, along with the 26
several other depots in this region, may also be related to 27
the Yen Bay Ordnance Depot and be part of a major ammunition 28
supply complex for the DRV. 29
 8. TARGET ENVIRONMENT: The ammunition depot is located in a 30
valley running SW from Tuyen Quang to the Chay River. The 31
depot is built in and around low hills to help in blast con- 32
finement. There are no urban areas near the depot. The hills 33
are heavily wooded and the fields are fairly heavily cultivated 34
in the valley. The 246 Inf Regt is located at Tuyen Quang 35
just 7.5 NM NE of the ammunition depot. Elements of the 305 36
Inf Bge are SE of the depot of Phu Tho and Phu Loc. 37
 9. DEFENSE ENVIRONMENT: There are no known AAA sites in the 38
target area; however, prepared AW positions are located in the 39
vicinity of the guard posts (gate houses) and barracks. Anti- 40
air defense could be supplemented by elements of units in the 41
region, especially the 246th Inf Regt which reportedly may 42
have an AA defense role. Nearest radar is the early warning 43
site (SCR-270) at Thai Nguyen. 44
 10. DAMAGE OBJECTIVE: Destruction of stored ammunition. 45
Damage criterion is structural damage to storage buildings with 46
accompanying damage to stored ammunition. Damage level is 30%. 47
- * An additional revetted storage building is located south of
areas A and B.

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(4) Weapons/sorties operationally required to achieve
"overtarget" requirement shown above:

1045/87 2560/214 2560/246 2560/427

15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%.

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~~TOP SECRET~~

A-C-AT-4

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NORTH VIETNAM
VINH YEN AMMUNITION DEPOT
7-18 20N 103-11E

REF 3616 00253
DATE OF PHOTO 17 JULY 1967
SCALE 1:7500 (APPROX)
DATE OF INTELLIGENCE REVIEW 18 OCTOBER 1968
PHOTO REFERENCE UE VI 827 1 MPAN 030

TWO FOREIGN DISSEM

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 47.14 1
2. BE NUMBER: 616-0353 2
3. IDENTIFICATION: Vinh Yen Ammunition Depot 3
4. DATE OF INFORMATION: 1 Oct 1968 4
DATE OF TISD: 5 Nov 68 5
DATE OF PHOTOGRAPHY: 17 Jul 67 6
DATE OF INTELLIGENCE REVIEW: 16 Oct 68 7
5. LOCATION: 21-18-21N 105-37-57E, located 2 NM E of Vinh Yen, 8
on the E side of the Ha Noi-Lao Cai Railroad. 9
6. DESCRIPTION: This depot covers approximately 20 acres and con- 10
tains 6 areas. Areas A and B contain 24 revetted ammunition storage build- 11
ings and 2 support buildings. Areas D and E contain 26 open and one support 12
building. Areas C and F contain 5 support buildings. Storage capacity is esti- 13
mated at 3500 M. T. 14
7. SIGNIFICANCE: This target is the major ammunition supply installa- 15
tion in the Vinh Yen area. It is believed to provide ammunition for the 312th 16
Inf Div which is located at several encampments N, E, and W of Vinh Yen, in 17
about 10 identified military areas. The general Vinh Yen area also houses the 18
only armored element of the NVA, an estimated regiment, whose ammunition 19
logically would be processed through this installation. 20
8. TARGET ENVIRONMENT: The land is rolling and irregular, marked 21
alternately by copse and farmland. Khai Quang village is immediately adjacent 22
on the W side of the target, and two small and similar hamlets lie to the N of 23
Khai Quang. The rail and road beds connecting Ha Noi and Lai Chou are the 24
principal visible routes. 25
9. DEFENSE ENVIRONMENT: 26
 - a. The target is within the SAM envelope. 27
 - b. AAA activity has been identified within 3 NM of the target. 28
 - c. HMG and small arms fire is anticipated. 29
10. DAMAGE OBJECTIVE: Destruction of stored materials. Damage 30
criterion is structural damage to storage buildings and accompanying destruc- 31
tion to stored ammunition. Damage level is 30%. 32
11. EFFECT ON NVN: Loss of this installation would seriously affect 33
both the training and operational capabilities of the 312th Infantry Division and 34
the 202nd Armored Division. 35

~~SECRET~~ NO FOREIGN DISSEM EXCLUDED FROM AUTOMATIC DOWNGRADING

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(Revised by 14th Note to Holders)

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12. RECUPERABILITY: It is estimated that 30% damage to the physical installation could be repaired to operating level within a week, using local resources. Re-stocking of the ammunition, provided that the road and rail net were not seriously damaged, could probably be effected in 3-4 days, if it is assumed that stocks are available in Southern China. Re-stocking from North Vietnam resources would probably take longer.

13. COLLATERAL DAMAGE:

a. Insignificant

Population				Casualties*			
Target Area		Adjacent Area		Target Area		Adjacent Area	
Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ
150	0	100	275	9	0	1	3

*Casualties estimated under daylight alert conditions.

14. RECOMMENDED WEAPONS AND SORTIES:

This is a large target complex comprised of 6 areas. Two of the areas (with 5 sub-areas) have been delineated for weapons application. Weapons and sorties have been computed for each area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target are also shown:

(1) In order to achieve a damage level of 30%, weapons/sorties required over target:

WEAPON	250# SNAKEYE	or	500# SNAKEYE	or	500# BOMB	or	750# BOMB
Area A-1 (80x265)	27/2		27/3		90/10		90/15
Area A-2 (65x285)	26/2		26/3		92/10		92/15
Area A-3 (60x310)	26/2		26/3		95/11		95/16
Area A-4 (55x440)	31/3		31/3		112/12		112/19
Area B (85x465)	13/1		13/1		41/5		41/7
TOTAL	123/10		123/13		430/48		430/72

(2) Weapons/sorties operationally required to achieve "over target" requirements shown above:

148/12	148/16	516/57	516/86
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(3) In order to achieve a damage level of 70%, weapons/sorties required over target:

WEAPON	250# SNAKEYE	or	500# SNAKEYE	or	500# BOMB	or	750# BOMB
Area A-1	90/8		90/10		304/34		304/51
Area A-2	86/7		86/10		309/34		309/52
Area A-3	88/7		88/10		318/35		318/53
Area A-4	104/9		104/12		376/42		376/63
Area B	43/4		43/5		137/15		137/23
TOTAL	411/35		411/47		1444/160		1444/242

(4) Weapons/sorties operationally required to achieve "over target" requirements shown above:

494/41 494/55 1733/193 1733/289

15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%.

A-C-Au-4

~~SECRET~~

(Revised by 15th Note to Holders)

47.14

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1947 RV-2

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~~TOP SECRET~~

TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 47.16 1
2. BE NUMBER: 615-0279 2
3. IDENTIFICATION: Hon Gai Explosives Storage 3
4. DATE OF INFORMATION: 14 July 1966 4
DATE OF TIS: 2 August 1966 5
DATE OF PHOTOGRAPHY: 18 November 1965 6
DATE OF INTELLIGENCE REVIEW: 21 January 1966 7
5. LOCATION: 26-59-09N 107-06-39E, UTM YJ 193219, 1.6 NM north of Khu Ka Lam, approximately 5 NM north of Hon Gai. 8
9
6. DESCRIPTION: Hon Gai Explosives Storage is dispersed around 2 small lakes and contains seven identified areas. There are a total of 12 revetted storage buildings having an estimated storage capacity of 3,150 metric tons; 6 support buildings; and to the south of the storage areas, 2 barracks buildings which can house up to 100 troops. 10
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7. SIGNIFICANCE: This storage area probably supports elements of the 320th Division held by Order of Battle in the general Hai Phong military complex. 15
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17
8. TARGET ENVIRONMENT: This storage facility is located north of Hon Gai in an area where the tidal flats and tributaries of the Song Tien Vong merge with the low wooded hills of the shore line. 18
19
20
9. DEFENSE ENVIRONMENT: 21
 - a. Four SAM sites have been identified within SA-2 missile range (17.5 NM) of the target and 9 additional sites are 18-30 NM distant. 22
23
 - b. No AAA defense activity has been identified in the immediate vicinity of the target. The general Hon Gai area defenses include 8 active sites (14 occupied 37mm and 30 occupied 57mm/85mm AAA positions) and 3 inactive sites. (DOI: 22 August - 23 December 1965) 24
25
26
27
 - c. Light small arms/machine gun fire from the barracks and support area would be probable. 28
29
10. DAMAGE OBJECTIVE: Destruction of stored ammunition. Damage criterion is structural damage to storage buildings with accompanying damage to stored ammunition. Damage level is 30 per cent. 30
31
32
11. EFFECT ON NVN: Destruction of this stored ammunition and storage facilities would reduce supplies to military elements in the Hai Phong military complex and possibly eliminate secure storage of new stocks coming in from China or from depots to the northwest. 33
34
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36

~~TOP SECRET~~

A-C-AW-2

(Revised by 9th Note to Holders)

Tab AW to
Annex C to
Appendix A

~~TOP SECRET~~

12. RECUPERABILITY: This storage area could resume operations within 1
2 to 3 days using canvas as temporary storage. Replacement of stocks could be 2
accomplished by the time the area is cleaned up and temporary storage 3
prepared. 4

13. COLLATERAL DAMAGE: 5

a. None 6

Population				Casualties*			
Target Area		Adjacent Area		Target Area		Adjacent Area	
Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ
50	0	50	0	3	0	1	0

 7 8 9 10

*Casualties estimated under daylight alert conditions. 11

14. RECOMMENDED WEAPONS AND SORTIES: 12

This target complex is comprised of seven areas. Weapons and 13
sorties have been computed for each area. To show the effort required 14
to achieve the damage level prescribed, total weapons/sorties required 15
over the target are also shown: 16

(1) In order to achieve a damage level of 30%, weapons/sorties 17
required over target: 18

WEAPON	250# SNAKEYE	250# or BULLPUP or	250# BOMB or	500# BOMB or	750# BOMB	
Area A (100x500)	14/1	13/7	42/4	42/5	42/7	19
Area B (200x250)	19/2	13/6	41/3	21/2	13/2	20
Area C (100x800)	20/2	19/10	58/5	58/6	58/10	21
Area D (50x150)	29/2	18/9	111/9	111/12	111/19	22
Area E (100x350)	12/1	10/5	35/3	35/4	35/6	23
Area F (150x400)	19/2	16/8	47/4	24/3	14/2	24
Area G (100x250)	10/1	7/3	31/3	31/4	31/5	25
Totals	123/11	96/48	365/31	322/36	304/51	26

(2) Weapons/sorties operationally required to achieve "over 27
target" requirement shown above: 28

150/13	117/59	445/38	393/44	371/62	29
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~~TOP SECRET~~

A-C-AW-3

(Revised by 9th Note to Holders)

Tab AW to
Annex C to
Appendix A

~~TOP SECRET~~

(3) In order to achieve a damage level of 70%, weapons/sorties required over target:

1
2

WEAPON	250# SNAKEYE	250# or BULLPUP	250# BOMB or	500# BOMB or	750# BOMB	
Area A	48/4	44/22	142/12	142/16	142/24	3
Area B	64/5	44/22	138/12	71/8	44/7	4
Area C	68/6	64/32	196/16	196/22	196/34	5
Area D	98/8	61/31	374/31	374/41	374/62	6
Area E	41/4	34/17	118/10	118/13	118/20	7
Area F	64/5	54/27	158/13	81/9	48/8	8
Area G	34/3	24/12	105/9	105/12	105/17	9
Totals	417/35	325/163	1231/103	1087/121	1027/172	10

(4) Weapons/sorties operationally required to achieve "over target" requirements shown above:

11
12

509/43 396/198 1501/126 1326/148 1252/209 13

15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%

14

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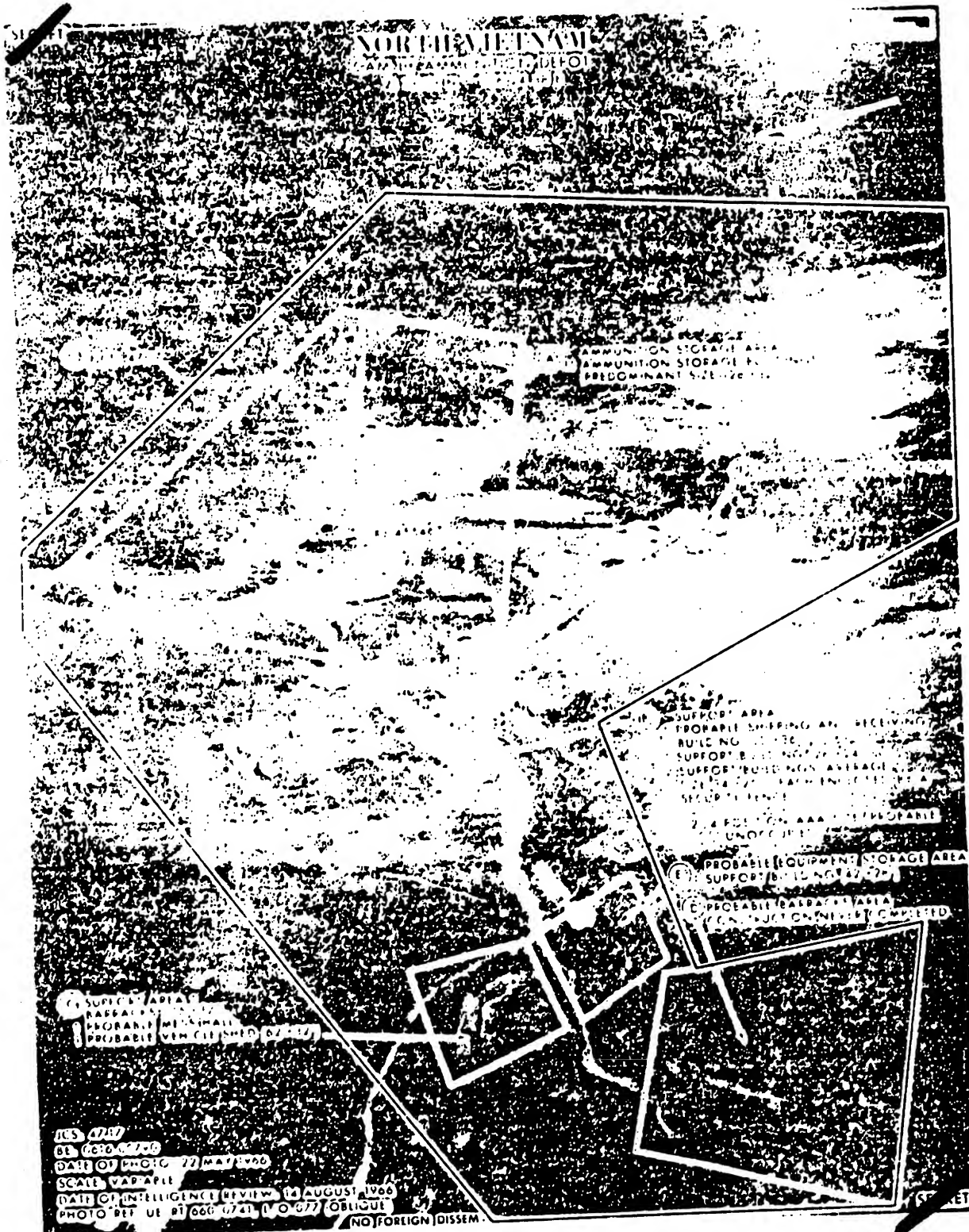
A-C-AW-4

(Revised by 9th Note to Holders

Tab AW to
Annex C to
Appendix A

TAB AX TO ANNEX C TO APPENDIX A

TARGET NO. 47. 17



~~TOP SECRET~~
(Released by 11th N/H)

A-C-AX-1

Tab AX to Annex C
to Appendix A

~~TOP SECRET~~

TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 47.17 1
2. BE NUMBER: 616-0790 2
3. IDENTIFICATION: Cam Ly Ammunition Depot 3
4. DATE OF INFORMATION: 13 September 1966 4
DATE OF TIS: 5 October 1966 5
DATE OF PHOTOGRAPHY: 22 May 1966 6
DATE OF INTELLIGENCE REVIEW: 14 August 1966 7
5. LOCATION: 21-13-00N 106-24-03E UTM XJ 455467, 2 NM west of Cam Ly. 8
6. DESCRIPTION: This ammunition depot is fence-secured and contains 11 dispersed storage buildings. The estimated storage capacity of these buildings is 7430 metric tons. Adjoining the storage area and inside the security fence are 5 small buildings, two of which are individually fenced. The barracks and support facilities are at the northwest end of the depot and contain a vehicle shed, mess hall, and a barracks capable of housing 130 troops. To the northwest of this support area there appears to be additional barracks under construction. 9-15
7. SIGNIFICANCE: This depot probably provides secure storage of ammunition coming in from China and in turn supports the Ha Noi/Hai Phong complex and ammunition depots to the south. 16-18
8. TARGET ENVIRONMENT: This depot is located in the foothills of a mountain range south of the Song Thuong. To the north of the installation are cultivated river lowlands and scattered villages. 19-21
9. DEFENSE ENVIRONMENT: 22
 - a. Eighteen SAM sites have been identified within SA-2 missile range (17.5 NM) of the target, and 25 additional SAM sites have been identified 18-30 NM distant. 23-25
 - b. There is no identified AAA activity in the immediate target vicinity. The nearest AAA activity is at Mai Thinh (9 unoccupied sites) approximately 5 NM northwest. 26-28
 - c. Sparse HMG and small arms fire is anticipated. 29
10. DAMAGE OBJECTIVE: Destruction of stored ammunition. Damage criterion is structural damage to storage buildings with accompanying damage to stored ammunition. Damage level is 30%. 30-32
11. EFFECT ON NVN: Destruction of this ammunition and storage facility would delay re-supplying ammunition stocks to damaged ammunition depots further south and would also deny secure storage for new stocks coming in from China. Supply for troops in the Ha Noi/Hai Phong complex would also be curtailed. 33-37
12. RECUPERABILITY: It would take from 2 to 3 days to remove debris and prepare temporary storage under canvas. Replacement of destroyed stores from Chinese sources would require from 4 to 5 days. 38-40

~~TOP SECRET~~

A-C-AX-2

Tab AX to
Annex C to
Appendix A

(Revised by 11th Note to Holders)

~~TOP SECRET~~

13. COLLATERAL DAMAGE:

a. None

Population				Casualties*			
Target Area		Adjacent Area		Target Area		Adjacent Area	
Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ
90	0	40	0	5	0	0	0

*Casualties estimated under daylight alert conditions.

14. RECOMMENDED WEAPONS AND SORTIES:

This installation is comprised of six areas. Two areas have been delineated for weapons application. Weapons and sorties have been computed for each area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target are also shown:

(1) In order to achieve a damage level of 30%, weapons/sorties required over target:

WEAPON	250# BOMB	or	500# BOMB	or	750# BOMB	or	1000# BOMB
Area A (1250x2350)	304/25		304/34		304/51		304/101
Area B (450x550)	80/7		41/5		24/4		21/7
Totals	384/32		345/39		328/55		325/108

(2) Weapons/sorties operationally required to achieve "over target" requirements shown above:

468/39	421/47	400/67	396/132
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(3) In order to achieve a damage level of 70%, weapons/sorties required over target:

WEAPON	250# BOMB	or	500# BOMB	or	750# BOMB	or	1000# BOMB
Area A	1025/85		1025/114		1025/171		1025/342
Area B	237/20		139/15		81/14		71/24
Totals	1262/105		1164/129		1106/185		1096/366

(4) Weapons/sorties operationally required to achieve "over target" requirements shown above:

1539/129	1420/158	1349/225	1337/446
----------	----------	----------	----------

15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%

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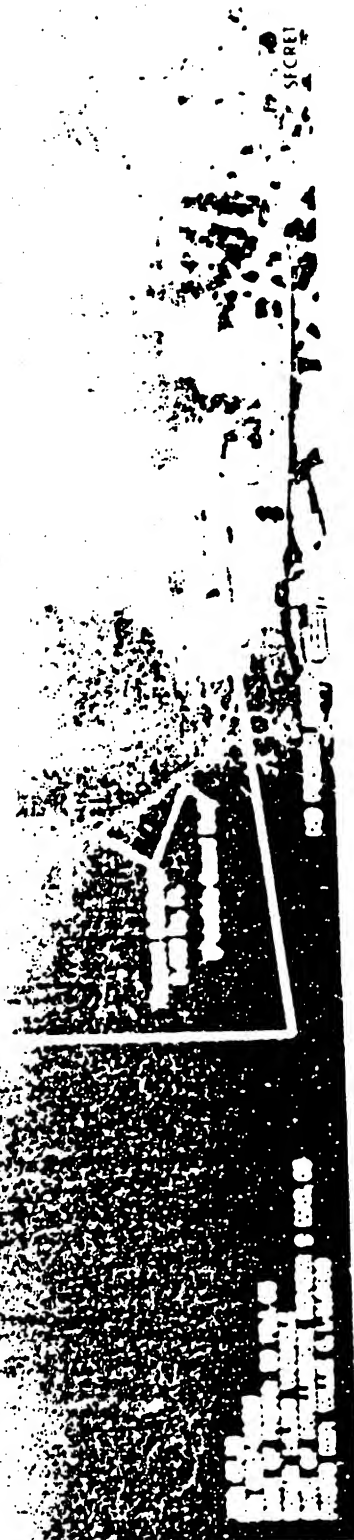
A-C-AX-3

Tab AX to
Annex C to
Appendix A

(Revised by 11th Note to Holders)

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TAB AY TO ANNEX C TO APPENDIX A
TARGET NO. 0001



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A-C-AY-1

Tab AY to Annex C
to Appendix A

AV2

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 47.18 1
2. BE NUMBER: 617-0626 2
3. IDENTIFICATION: Xom Rung Ammunition Depot 3
4. DATE OF INFORMATION: 20 Feb 1965. 4
DATE OF TIS: 27 Mar 1965 5
5. LOCATION: 17-44-50N/105-56-10E, UTM WE 993622, approxi- 6
mately 1 NM NW of Xom Rung. 7
6. DESCRIPTION: This depot contains 2 areas with a total of 8
8 dispersed storage buildings with an estimated storage capac- 9
ity of 4,120 Metric tons. To the south and adjoining the 10
ammunition storage area is a barracks and support area capable 11
of housing 100 troops. 12
7. SIGNIFICANCE: This depot has access to the coastal area 13
by way of Route 101 and probably contributes to the support 14
of the Dong Hoi Military Complex, location of major elements 15
of the 325 Infantry Division. Further, this depot is the 16
only known ammunition depot of any size relatively close to 17
Route 12 and Mu Gia Supply and Staging Point. 18
8. TARGET ENVIRONMENT: The ammunition storage buildings 19
are dispersed in a wooded hilly area to the northwest of a 20
cultivated valley and Xom Rung village. 21
9. DEFENSE ENVIRONMENT: 22
 - a. No known AAA are located in the target area. Nearest 23
AAA defenses are located at Don Bai Dinh, approximately 24
9 NM west, and at Mu Gia Pass approximately 10 1/2 NM southwest. 25
 - b. Prepared AW (up to 12.7mm) positions are probably 26
located within the installation. 27
10. DAMAGE OBJECTIVE: Destruction of stored ammunition. 28
Damage criterion is one hit per storage structure with 29
accompanying damage to stored ammunition. Damage level is 30
50 percent. 31
11. EFFECT ON DRV: Damage to this ammunition depot will 32
reduce support to military elements in the Dong Hoi Military 33
Complex and possibly curtail assistance to Pathet Lao efforts. 34
12. RECUOPERABILITY: It would require at least 24 hours to 35
clean up damage and store ammunition under canvas. Replace- 36
ment of lost ammunition could be accomplished within 24 hours 37
if acquired from the closest ammunition depots to the north. 38

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A-C-AY-2

Tab AY to
Annex C to
Appendix A

(Revised by 6th Note to Holders - 25 March 1966)

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13. COLLATERAL DAMAGE: Insignificant. /

1

14. RECOMMENDED WEAPONS AND SORTIES:

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a. This is a large target complex comprised of two areas. Weapons and sorties have been computed for each area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target is also shown.

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(1) In order to achieve a damage level of 30% weapons/sorties required over target:

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9

Weapon:	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	750# BOMB	
Area A	27/2		54/4		54/6		54/9	10
Area B	102/9		140/12		140/16		140/23	11
TOTALS:	129/11		194/16		194/22		194/32	12

(2) Weapons/sorties operationally required to achieve "over target" requirement shown above:

13

14

157/13 237/20 237/27 237/39

15

(3) In order to achieve a damage level of 70% weapons/sorties required over target:

16

17

Weapon:	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	750# BOMB	
Area A	91/8		182/15		182/20		182/30	18
Area B	345/29		473/40		473/53		473/79	19
TOTALS:	436/37		655/55		655/73		655/109	20

(4) Weapons/sorties operationally required to achieve "over target" requirement shown above.

21

22

530/45 800/67 800/89 237/134

23

15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%.

24

~~TOP SECRET~~

A-C-AY-3

Tab AY to
Annex C to
Appendix A

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~~CONFIDENTIAL~~

NORTH VIETNAM
DAM BANG CHIEU AMMUNITION DEPOT

SECRET
NO FOREIGN DISSEM

REF ID: A66666
DATE OF ORIGIN: 20 JAN 68
DATE OF RELEASE: 20 JAN 68
DATE OF DECLASSIFICATION: 21 JAN 68
FOUO REF ID: A66666

NO FOREIGN DISSEM

~~CONFIDENTIAL~~

~~TOP SECRET~~
~~CONFIDENTIAL~~

~~TOP SECRET~~

TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 47 19 1
2. BE NUMBER: 616-0559 2
3. IDENTIFICATION: Ban Nuoc Chieu Ammunition Depot 3
4. DATE OF INFORMATION: 14 February 1965 DATE OF TIS: 1 April 1965 4
5
5. LOCATION: 21-18-00N, 104-41-50E, UTM VJ 680560, 2.5 NM south of Ban Nuoc Chieu. 6
7
6. DESCRIPTION: This depot is a large irregularly-shaped fenced area containing two separate groups of dispersed ammunition storage buildings having an estimated storage capacity of 11,900 metric tons. The smaller group, Area A, is located at the extreme NW end of the secured area and contains 7 ammunition storage structures. A barracks building, 1 vehicle shed, 1 administration building, 1 NON-explosive storage building and several small support buildings are nearby but outside the target area. A small village lies just outside the fence and to the NE of this area. The larger cluster of ammunition storage buildings are dispersed through the center of the installation and comprises target areas B, C, and D. There are 4 storage buildings and 1 unidentified structure in Area B. A non-explosive storage building and a small village are just north of this area. Area C contains 5 ammunition storage buildings and Area D contains 3. To the south and outside Area D are 1 ammunition storage building and 2 sizeable non-explosive storage buildings. Area E is at the southern end of the facility and contains the barracks and support complex. This area contains 2 administration buildings, 9 barracks/storage type structures, 3 probable vehicle sheds, and several support buildings. Four quarters-type buildings are just south and outside of the target area. These barracks facilities could accommodate approximately 200 troops. 8
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7. SIGNIFICANCE: This depot is the primary ammunition storage facility for Military Region Northwest and probably also contributes to the support of PL efforts to the south. 33
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8. TARGET ENVIRONMENT: The depot is located in a hilly wooded area midway between the Red and Black Rivers; however, there are cultivated and settled valleys on the northwest and southeast boundaries. 36
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9. DEFENSE ENVIRONMENT: No known AAA defenses have been identified in the target area; however, AW positions and trenching are evident. The nearest radars are a KNIFEREST-B early warning and a ROCK/STONE CAKE height-finder at Xom Lom, and a RUS-2 early warning at Son La. 40
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10. DAMAGE OBJECTIVE: Destruction of stored ammunition. Damage criterion is structural damage to storage buildings with accompanying damage to stored ammunition. 45
46
47
11. EFFECT ON DRV: Destruction of this stored ammunition and storage would eliminate secure storage for new stocks coming in by rail from China and would seriously effect support of troops in the Northwest Military Region. In addition, support to PL efforts would probably suffer some reduction. 48
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~~TOP SECRET~~

A-C-AZ-2

Tab AZ to
Annex C to
Appendix A

~~TOP SECRET~~

12. RECUPERABILITY: Four to five days would be required to clear the depot of debris and establish storage under canvas. Replacement of destroyed stores from China would require at least 4 to 5 days. If obtained from other depots to the east, 2 to 4 days would be necessary.

13. COLLATERAL DAMAGE: Insignificant.

14. RECOMMENDED WEAPONS AND SORTIES:

a. This is a large target complex comprised of five areas. Weapons and sorties have been computed for each area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target is also shown.

(1) In order to achieve a damage level of 30%, weapons/sorties required over target:

Weapon:	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	750# BOMB	
Area A	35/3		55/5		55/6		55/9	15
Area B	48/4		62/5		62/7		62/10	16
Area C	75/6		97/8		97/11		97/16	17
Area D	30/3		47/4		47/5		47/8	18
Area E	56/5		96/8		50/6		29/5	19
Totals	244/20		357/30		311/35		290/48	20

(2) Weapons/sorties operationally required to achieve "over target" requirement shown above:

298/25 436/37 380/43 354/59

(3) In order to achieve a damage level of 70% weapons/sorties required over target:

Weapon	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	750# BOMB	
Area A	118/10		185/15		185/21		185/31	26
Area B	160/13		208/17		208/23		208/35	27
Area C	250/21		326/27		326/36		326/54	28
Area D	100/8		158/13		158/17		158/26	29
Area E	188/16		320/27		170/19		98/16	30
Totals	816/68		1197/99		1047/116		975/162	31

(4) Weapons/sorties operationally required to achieve "over target" requirement shown above:

995/83 1460/121 1277/142 1189/198

15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%.

~~TOP SECRET~~

A-C-AZ-3

Tab AZ to
Annex C to
Appendix A

~~TOP SECRET~~

TAB BA TO ANNEX C TO APPENDIX A

TARGET NO. 47.2

NORTH VIETNAM
LANG CHI EXPLOSIVES PLANT

21 47 10.74 105 15 00 E 100

~~SECRET~~



ACS 422
100 0000000
DATE OF PHOTO: 10 OCT 68
SCALE: 1:100,000
DATE OF INFORMATION: 10 OCT 68
PHOTO: 100 0000000

NOT FOREIGN DISSEM.

~~SECRET~~

~~TOP SECRET~~

A-C-BA-1

Tab BA to Annex C
to Appendix A

~~TOP SECRET~~

TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 47.2 1
2. BE NUMBER: 616-0366 2
3. IDENTIFICATION: Lang Chi Explosives Plant 3
4. DATE OF INFORMATION: 30 December 1964 DATE OF TIS: 19 May 1965 4
5
5. LOCATION: 21-41-38N/105-15-00E, UTM WJ 260998 6
6. DESCRIPTION: This installation comprises 5 areas as follows: 7
8
 - a. The main plant consisting of one large administration building, 6 large processing buildings, one power plant, one power house, and 14 support buildings. 9
10
11
 - b. A storage area containing 11 revetted buildings. 12
 - c. A storage area containing 9 revetted or partly revetted buildings. 13
14
 - d. A test range area which includes 2 test ranges and buildings. 15
16
7. SIGNIFICANCE: This is the only known explosives plant in North Vietnam. It has an estimated yearly capacity of 1,000 metric tons; however, yearly output is unknown. 17
18
19
8. TARGET ENVIRONMENT: Target is completely isolated in open terrain. Except for probable workers housing adjacent to the plant, the area is relatively unpopulated (nearest village is 4 km to the SE). 20
21
22
23
9. DEFENSE ENVIRONMENT: There are no known AAA sites in the target area; however, AW defense would be anticipated. Anti-air defense could be provided by elements of military units in the region, especially the 246th Infantry Regiment which reportedly may have an AA defense role. Nearest radar is the EW site at Thai Nguyen. 24
25
26
27
28
29
10. DAMAGE OBJECTIVE: Destruction of the facility. Damage criterion is structural damage to the processing, administration and storage buildings, and power plants, plus accompanying personnel casualties. Damage level is 30 percent. 30
31
32
33
11. EFFECT ON NVN: Negligible. North Vietnam relies on imports from the Sino-Soviet Bloc for explosive munitions. 34
35
12. RECUPERABILITY: Pre-attack capability can be restored in about 45 days. 36
37
13. COLLATERAL DAMAGE: Insignificant. 38
14. RECOMMENDED WEAPONS AND SORTIES: 39
 - a. This is a large target complex comprised of five areas. Weapons and sorties have been computed for each area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target is also shown. 40
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~~TOP SECRET~~

A-C-BA-2

Tab BA to
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Appendix A

(Revised by 7th Note to Holders)

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(1) In order to achieve a damage level of 30%,
weapons/sorties required over target:

Weapon:	500# BOMB	or	750# BOMB	or	1000# BOMB	
Area A	51/5		51/8		51/17	3
Area B	70/8		70/12		70/23	4
Area C	99/11		68/11		61/20	5
Area D	13/1		13/2		13/4	6
Area E	69/8		69/12		69/23	7
Area F	106/12		106/18		106/35	8
Totals:	408/45		377/63		370/123	9

(2) Weapons/sorties operationally required to achieve
"over target" requirement shown above:

500/55 460/77 452/150

(3) In order to achieve a damage level of 70%,
weapons/sorties required over target:

Weapon:	500# BOMB	or	750# BOMB	or	1000# BOMB	
Area A	172/19		172/29		172/57	15
Area B	236/26		236/39		236/78	16
Area C	334/37		230/38		206/69	17
Area D	44/5		44/7		44/15	18
Area E	233/26		233/39		233/78	19
Area F	357/40		357/60		357/119	20
Totals:	1376/153		1272/212		1248/416	21

(4) Weapons/sorties operationally required to achieve
"over target" requirement shown above:

1680/187 1560/269 1248/416

15. PROBABILITY OF ACHIEVING DAMAGE CRITERION: 50%

~~TOP SECRET~~

A-C-BA-3

Tab BA to
Annex C to
Appendix A

1047 RV-2

533

TARGET NO. 67.21



~~SECRET~~

TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 47.21 1
2. BE NUMBER: 616-0725 2
3. IDENTIFICATION: Bac Giang Ammunition Depot 3
4. DATE OF INFORMATION: 1 Oct 68 4
DATE OF TISD: 5 Nov 68 5
DATE OF PHOTOGRAPHY: 4 Sep 66 6
DATE OF INTELLIGENCE REVIEW: 16 Oct 68 7
5. LOCATION: 21-18-30N 106-08-50E, located approximately. 2.7 NM 8
NW of Bac Giang. 9
6. DESCRIPTION: This storage facility contains 8 revetted storage build- 10
ings, 1 barracks, 2 small support buildings, and 1 messhall. In addition, there 11
is one small revetted building in a high explosives storage area on the hillside 12
and slightly removed from the storage buildings. Access to Bac Giang, Route 1A 13
and the Ha Noi-Lang Son Railroad is provided by both road and waterway. Esti- 14
mated storage capacity is approximately 3300 M. T. and the barracks space could 15
accommodate up to 120 personnel. 16
7. SIGNIFICANCE: This depot probably supports the numerous military 17
installations known to be in the Bac Giang area and possibly affords storage 18
space for munitions shipped by rail from Communist China. 19
8. TARGET ENVIRONMENT: This installation is located at the base of 20
a range of low scrub-covered hills and is abutted on the W by rice fields. 21
There is a broad canal about 200 yards to the N. 22
9. DEFENSE ENVIRONMENT: 23
 - a. The target is within the SAM envelope. 24
 - b. AAA has been identified within 3 NM of the target. 25
 - c. HMG and small arms fire is anticipated. 26
10. DAMAGE OBJECTIVE: Destruction of stored ammunition. Damage 27
criterion is structural damage to storage buildings with accompanying damage 28
to stored ammunition and personnel. Damage level is 30%. 29
11. EFFECT ON NVN: Destruction of these facilities would have a 30
minimal effect on the overall NVN military posture; however, supply to nearby 31
military installations would be disrupted for a time. In addition, secure stor- 32
age would possibly be denied to incoming shipments. 33

~~SECRET~~ NO FOREIGN DISSEM EXCLUDED FROM AUTOMATIC DOWNGRADING

~~SECRET~~

12. RECUPERABILITY: Limited operations could be resumed within 36 hours if temporary shelter is used for salvaged materials. Reconstruction could be accomplished within a week to 10 days since this target is close to Bac Giang and access routes are good. Replacement of stores, if from Communist China, could possibly be achieved within two to three weeks.

13. COLLATERAL DAMAGE:

a. None

Population				Casualties*			
Target Area		Adjacent Area		Target Area		Adjacent Area	
Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ
80	0	10	0	5	0	0	0

*Casualties estimated under daylight alert conditions.

14. RECOMMENDED WEAPONS AND SORTIES:

This target is comprised of three areas. Four sub-areas (within 2 target areas) have been delineated for weapons application. Weapons and sorties have been computed for each area. To show the effort required to achieve the desired damage level, total weapons/sorties required over the target are also shown:

(1) In order to achieve the damage level of 30%, weapons/sorties required over target:

WEAPON	250#	500#	500#	750#
	SNAKEYE	or SNAKEYE	or BOMB	or BOMB
Area A-1 (475x85)	11/1	11/1	34/4	34/6
Area A-2 (415x60)	9/1	9/1	31/3	31/5
Area A-3 (325x90)	20/2	20/2	63/7	63/11
Area A-4 (505x170)	17/1	17/2	37/4	37/6
TOTAL	57/5	57/6	165/18	165/28

(2) Weapons/sorties operationally required to achieve "over target" requirements shown above:

69/6	69/8	198/33	198/33
------	------	--------	--------

(3) In order to achieve the damage level of 70% weapons/sorties required over target:

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WEAPON	250# SNAKEYE	or	500# SNAKEYE	or	500# BOMB	or	750# BOMB	
Area A-1	36/3		36/4		114/13		114/19	3
Area A-2	30/3		30/3		104/12		104/17	4
Area A-3	67/6		67/7		213/24		213/36	5
Area A-4	56/5		56/6		125/14		125/21	6
TOTAL	189/7		189/20		556/63		556/93	7
(4) Weapons/sorites operationally required to achieve "over target" requirements shown above:								8
								9
	227/19		227/25		668/74		668/111	10
15. <u>PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL:</u>								11
								50%

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TAB BAE TO ANNEX C TO APPENDIX A

TARGET NO. 47.22



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A-C-BAb-1

Tab BAb to
Annex C to
Appendix A

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 47.22 1
2. BE NUMBER: 616-0905 2
3. IDENTIFICATION: Bac Can Ammo Depot 3
4. DATE OF INFORMATION: 14 July 1966 DATE OF DIS: 20 June 1966 4
5
5. LOCATION: 22-06-50N 105-53-10E, UTM WK 913454, 3.5 NM SE of Bac Can, just north of Route 3. 6
7
6. DESCRIPTION: This installation is approximately 40 NM from the Chilcom/NVN border. The depot is situated in an irregularly-shaped area of approximately 300 acres. The administration and support area is located on the east and southeast edge of the complex and contains approximately 4 barracks, 11 support buildings, 1 administration building, 1 mess hall and two non-explosive storage buildings. The major storage area contains approximately 8 revetted storage buildings, 4 unrevetted storage buildings, and 4 support/storage buildings. There are 4 buildings under construction which will probably be additional revetted storage. The present capacity is estimated to be approximately 2,000 metric tons. Barracks could accommodate approximately 175 men. 8
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7. SIGNIFICANCE: This ammo depot may serve as an initial transfer and storage area for explosives entering North Vietnam from China. No major military units are known to be located in the immediate vicinity. 21
22
23
24
8. TARGET ENVIRONMENT: The depot, located SE of Bac Can just off of Route 3, is built in and around low, rolling, heavily wooded hills. There are no urban areas near the depot; nor are there any major military units in the immediate vicinity. 25
26
27
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9. DEFENSE ENVIRONMENT: 30
 - a. One SAM site has been identified within SA-2 range (17.5 NM) of this target, and 2 sites have been identified 18-30 NM distant. 31
32
33
 - b. No AAA activity has been identified in the area of this target. 34
35
36
 - c. It is anticipated that local militia would attempt defense of this area with machine gun/small arms fire. 37
10. DAMAGE OBJECTIVE: Damage criterion is structural damage to storage buildings with resulting damage to stored ammunition and personnel. Damage level is 30%. 38
39
40
11. EFFECT ON DRV: There would be no immediate effect on support to the Viet Cong or PL forces; however destruction of ammunition stocks would delay resupply of depots to the south and curtail supply of possible troop build-up in this area. 41
42
43
44
12. RECUPERABILITY: Limited operation could be resumed in 24 hours. Resupply of destroyed ammunition could be brought from China in 72 hours. 45
46
47
13. COLLATERAL DAMAGE: None. 48

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A-C-BAb-2

Tab BAb to
Annex C to
Appendix A

(Revised by 9th Note to Holders)

539

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14. RECOMMENDED WEAPONS AND SORTIES:

a. While not particularly large, this target is comprised of 4 areas. Weapons and sorties have been computed for each area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target area are also shown:

(1) In order to achieve a damage level of 30%, weapons/sorties required over target:

Weapon	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	750# BOMB	
Area A	190/16		217/18		217/24		217/36	9
Area B	81/7		113/9		113/12		113/19	10
Area C	160/13		194/16		194/22		194/32	11
Area D	79/7		116/10		60/7		35/6	12
Totals	510/43		640/53		584/65		559/93	13

(2) Weapons/sorties operationally required to achieve "over target" requirements shown above:

622/52 780/65 712/79 682/113

(3) In order to achieve a damage level of 70%, weapons/sorties required over target:

Weapon	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	750# BOMB	
Area A	642/53		735/61		735/82		735/122	19
Area B	274/23		382/32		382/42		382/64	20
Area C	540/45		655/54		655/73		655/109	21
Area D	268/22		392/33		203/22		118/20	22
Totals	1724/143		2164/180		1975/219		1890/315	23

(4) Weapons/sorties operationally required to achieve "over target" requirements shown above:

2102/175 2639/220 2409/267 2305/384

15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%

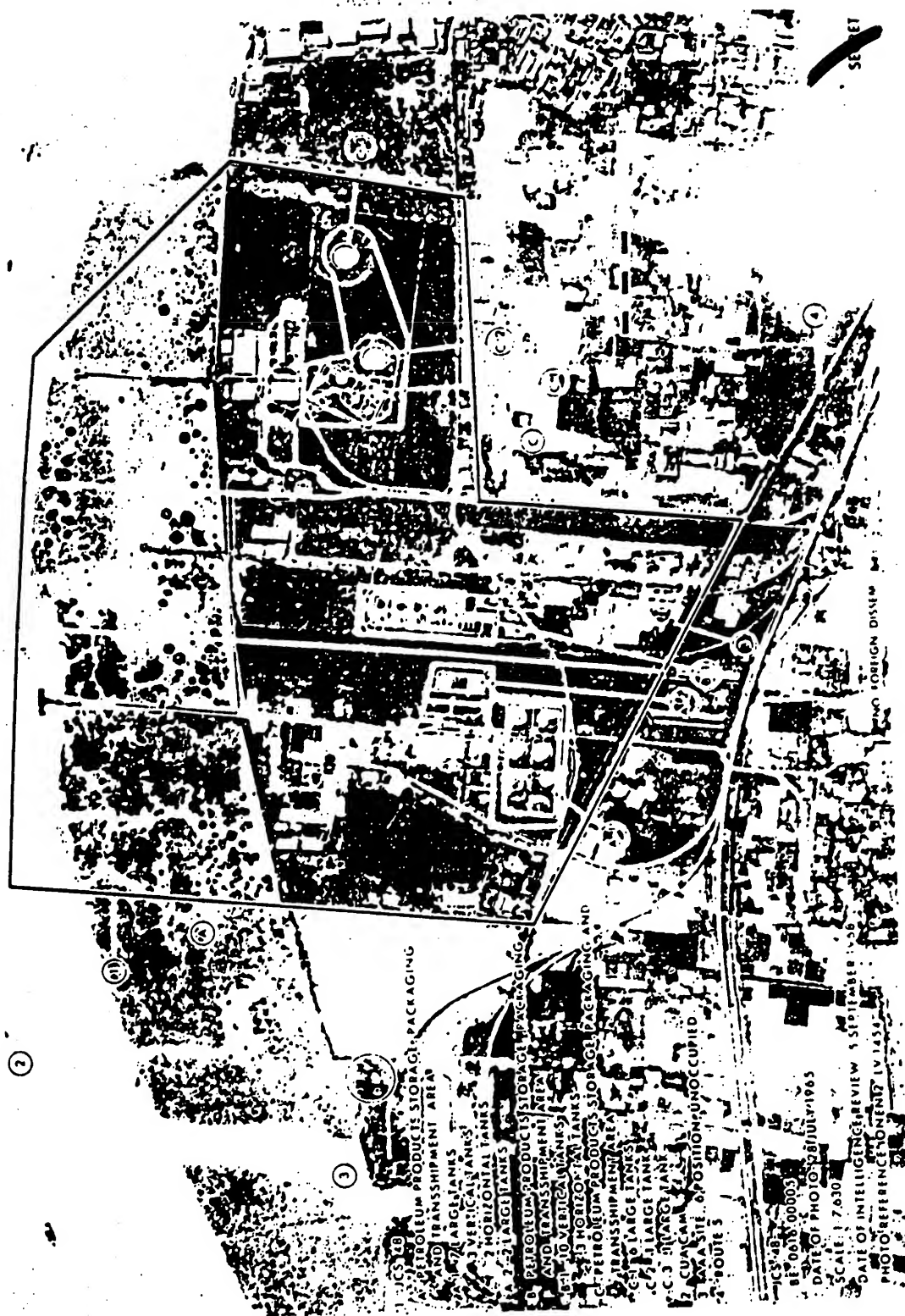
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A-C-BAb-3

Tab BAb to
Annex C to

540

NORTH VIETNAM
HAIPHONG PETROLEUM PRODUCT'S STORAGE
 20 32 7 N 105 36 44 E



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A-C-BB-1

1-1000000000
 DATE OF PHOTO 18 JULY 1965
 SCALE 1:7630
 DATE OF INTELLIGENCE REVIEW 1 SEPTEMBER 1966
 PHOTO REFERENCE NUMBER 14153

NO FOREIGN DISSEM

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 48 1
2. BE NUMBER: 616-0005 2
3. IDENTIFICATION: Hai Phong Petroleum Products Storage 3
4. DATE OF INFORMATION: 28 July 1965 4
DATE OF TIED: 12 November 1968 5
DATE OF PHOTOGRAPHY: 28 July 1968 6
DATE OF INTELLIGENCE REVIEW: 5 September 1968 7
5. LOCATION: 20-52-17N 106-39-44E, located 2 NM WNW of Hai Phong. 8
6. DESCRIPTION: This facility consists of 30 aboveground, 9
cylindrical, steel storage tanks ranging from 13 to 115 feet in 10
diameter, and 5 horizontal tanks about 10 to 12 feet in diameter. 11
Extensive support facilities include about 15-17 warehouse-type 12
buildings ranging from 110 x 70 feet to 860 x 150 feet. Numerous 13
smaller support buildings and open storage areas are dispersed 14
throughout the facility. Transportation services consists of 3 oil 15
piers, 3 branch rail lines, and a well-developed road system. The 16
entire depot is fenced. 17
7. SIGNIFICANCE: This depot, with a storage capacity of 18
40,770 metric tons, is of critical importance to the military 19
forces, industrial base, transportation system, and general 20
civilian economy of North Vietnam. This depot receives and distributes 21
about 90% of the petroleum products entering the country. 22
8. TARGET ENVIRONMENT: The target is located on the S bank 23
of the Cua Cam. With the exception of the built-up area of Hai 24
Phong, the target is surrounded by extensive areas of wetland rice 25
and small native villages. The target and surrounding area are 26
only a few feet above sea level except for an isolated hill that rises 27
to 480 feet about 4 NM to the N, and a group of hills that rise 28
to 460 feet about 5 NM to the S and SW. 29
9. DEFENSE ENVIRONMENT: 30
 - a. The target is within the SAM envelope. 31
 - b. AAA activity has been identified within 3 NM of the target. 32
 - c. HMG and small arms fire is anticipated. 33
10. DAMAGE OBJECTIVE: Destruction of stored POL. Damage criterion 34
is rupture of storage tanks and distortion of exposed piping and 35
equipment. Firing of spilled contents will enhance disability. 36
11. EFFECT ON NVN: Loss of this facility would disrupt the 37
normal POL import and distribution pattern. Loss of the POL 38
would significantly reduce stocks on hand and available storage 39
capacity. 40

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(Revised by 15th Note to Holders)

A-C-44-2

TAB BRto
Annex C to
Appendix A

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12. RECUPERABILITY: Restoration of this target to full, pre-strike capability would require a period of several months or possibly much longer. North Vietnam is not known to be manufacturing tank components, appropriate steel tubing, piping, pumps, or other items basic to the construction or maintenance of POL storage facilities. The existing reliance on imported materials and skills is expected to continue indefinitely. Although prefabricated tanks of Soviet design can be installed on a prepared site in about a week, it appears unlikely that either the Soviets or the Chinese could place all necessary elements together in less than four weeks, even under emergency conditions.

13. COLLATERAL DAMAGE:

a. Light damage to surrounding area.

b. Population

Casualties*

Target Area		Adjacent Area		Target Area		Adjacent Area	
Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ

25	100	80	680	2	6	1	7
----	-----	----	-----	---	---	---	---

*Casualties estimated under daylight alert conditions

14. RECOMMENDED WEAPONS AND SORTIES:

This is the largest petroleum storage facility in North Vietnam and is comprised of 3 areas. Weapons and sorties have been computed for 3 sub-areas. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target area also shown:

(1) In order to achieve a damage level of 30%, weapons/sorties required over target:

WEAPON	250# SNAKEYE	or	500# SNAKEYE	or	500# BOMB	or	750# BOMB
A-1 (555x245)	9/1		8/1		15/2		14/2
A-2 (210x80)	5/0		4/0		14/2		13/2
B-1 (420x140)	19/2		15/2		38/4		33/6
C-1 (350x210)	14/1		12/1		24/3		21/4
C-2 (115 Diameter)	2/0		2/0		5/1		5/1
C-3 (125 Diameter)	2/0		1/0		5/1		4/1
Total	51/4		42/4		101/13		90/16

(2) Weapons/sorties operationally required to achieve "over target" requirements shown above:

62/5	51/6	122/14	108/18
------	------	--------	--------

(3) In order to achieve a damage level of 70%, weapons/sorties required over target:

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(Revised by 15th Note to Holders)

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Annex Cto
Appendix 7

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A-1	30/3	27/3	48/5	45/8	1
A-2	16/1	14/2	47/5	43/7	2
B-1	63/5	50/6	127/14	111/19	3
C-1	46/4	39/4	78/9	70/12	4
C-2	4/0	4/0	16/2	15/3	5
C-3	4/0	4/0	14/2	13/2	6
Total	163/13	138/15	330/37	297/51	7

(4) Weapons/mortars operationally required to achieve "over target" requirements shown above: 8
9

196/16	166/18	396/44	357/60	10
--------	--------	--------	--------	----

15. PROBABILITY OF ACHIEVING DESIRED LEVEL: 50% 11

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3

#48

(Revised by 15th Note to Holders)

A-C-BB-4

TABBB to
Annex C to
Appendix A

544

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TARGET AREA

TARGET AREA

NORTH VIETNAM

HA NOI PETROLEUM PRODUCTS STORAGE THANH AM

21 03'56"N 105 53'51"E

1. POL STORAGE AREA 140 TANKS
2. AREA 27A-3 TA 4 WEAPONERED AREAS
3. STORAGE SUPPORT AREA
4. WAREHOUSES
5. ADMINISTRATION BUILDING
6. STORAGE SUPPORT BUILDINGS
7. ROUTE 1A
8. RAIL LINE
9. RED RIVER TRIBUTARY

FIG 45
RE OBTAINING
DATE OF PHOTO 24 FEB 65
SCALE 1:2,000 APPROX
DATE OF INTELLIGENCE REVIEW 2 APRIL 1969
PHOTO REF GEN 5 9R 0961

NO FOREIGN DISSEM

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Annex C To Appendix A

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 49
2. BE NUMBER: 616-0116
3. IDENTIFICATION: Ha Noi Petroleum Products Storage Thanh Am
4. DATE OF INFORMATION: 21 February 1965
DATE OF TISD: 26 June 1969
DATE OF PHOTOGRAPHY: 21 February 1965
DATE OF INTELLIGENCE REVIEW: 2 April 1969
5. LOCATION: 21-03-56N 105-53-51E, located 3.5 NM NE of Ha Noi.
6. DESCRIPTION: The target area contains 32 revetted vertical tanks varying in size from 25' to 45' in diameter, and eight bullet tanks, sizes unknown. There are two rail transfer points and a probable truck loading area. The support area includes about 38 buildings of various sizes. The facility is walled and fenced, and is served by rail and road.
7. SIGNIFICANCE: This facility has a storage capacity of 30,620 metric tons. It is the second largest POL storage depot in the country, representing about 14% of the total national capacity. The depot is believed to be the principal distribution point for most of the country. The target also serves as the receiving facility for POL imports entering the country by way of rail across Communist China.
8. TARGET ENVIRONMENT: The target is located 3.5 NM NE of and across the river from Ha Noi, at an elevation only a few feet above sea level. With the exception of the built-up area of Ha Noi, and the Gia Lam Airport 1.5 NM to the S, the target is surrounded by flat plains cultivated in wetland rice.
9. DEFENSE ENVIRONMENT:
 - a. The target is within the SAM envelope.
 - b. AAA activity has been identified within 3 NM of the target.
 - c. HMG and small arms fire is anticipated.
10. DAMAGE OBJECTIVE: Destruction of stored POL. Damage criterion is rupture of storage tanks and distortion of exposed piping and equipment. Firing of spilled contents will enhance disability.
11. EFFECT ON NVN: Loss of the storage capability and stocks on hand at this facility significantly reduce the supply of POL throughout the country, and disrupt both the flow of rail shipments into the country, as well as the distribution throughout a very large area. Shipments southward, including those believed going to the Viet Cong and Pathet Lao, would be severely reduced.

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A-C-BC-2

(Revised by 17th Note to Holders)

Tab BC to
Annex C to
Appendix A

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12. RECUPERABILITY: Restoration of this target to full pre-strike capability would require three to six months. North Vietnam is not known to be manufacturing tank components, appropriate steel tubing, pipings, pumps, or other items basic to the construction or maintenance of POL storage facilities. The existing reliance on imported materials and skills is expected to continue indefinitely. Although pre-fabricated tanks of Soviet design can be installed on a prepared site in about a week, it appears unlikely that either the Soviet or the Chinese could place all the necessary elements together in less than four weeks, even under emergency conditions.

13. COLLATERAL DAMAGE:

a. Insignificant

Population				Casualties*			
Target Area		Adjacent Area		Target Area		Adjacent Area	
Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ
25	40	0	160	2	2	0	2

*Casualties estimated under daylight alert conditions.

14. RECOMMENDED WEAPONS AND SORTIES:

The target is comprised of two areas. One area (including 4 sub areas) has been delineated for weapons application. Weapons and sorties have been computed for each sub area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target are also shown:

(1) In order to achieve a damage level of 30%, weapons/sorties required over target:

WEAPONS	250#	or	500#	or	500#	or	750#
	<u>SNAKEYE</u>		<u>SNAKEYE</u>		<u>BOMB</u>		<u>BOMB</u>
Area A-1 (505' x 165')	27/2		21/2		48/5		39/7
Area A-2 (270' x 155')	18/2		15/2		35/4		29/5
Area A-3 (275' x 265')	33/3		26/3		46/5		37/6
Area A-4 (295' x 75')	13/1		10/1		35/4		28/5
Total	91/8		72/8		164/18		133/23

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A-C-BC-3

(Revised by 17th Note to Holders)

Tab BC to
Annex C to
Appendix A

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(2) Weapons/Sorties operationally required to achieve "over target" requirements shown above:

109/10 86/10 197/22 160/28

(3) In order to achieve a damage level of 70%, weapons/sorties required over target:

WEAPONS	250# SNAKEYE or	500# SNAKEYE or	500# BOMB or	750# BOMB
Area A-1	89/7	71/8	161/18	131/22
Area A-2	60/5	48/5	118/13	96/16
Area A-3	110/4	85/9	155/17	124/21
Area A-4	43/4	34/4	116/13	94/16
Total	302/25	238/26	550/61	445/75

(4) Weapons/sorties operationally required to achieve "over target" requirements shown above:

362/20 286/31 660/73 534/90

15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%.

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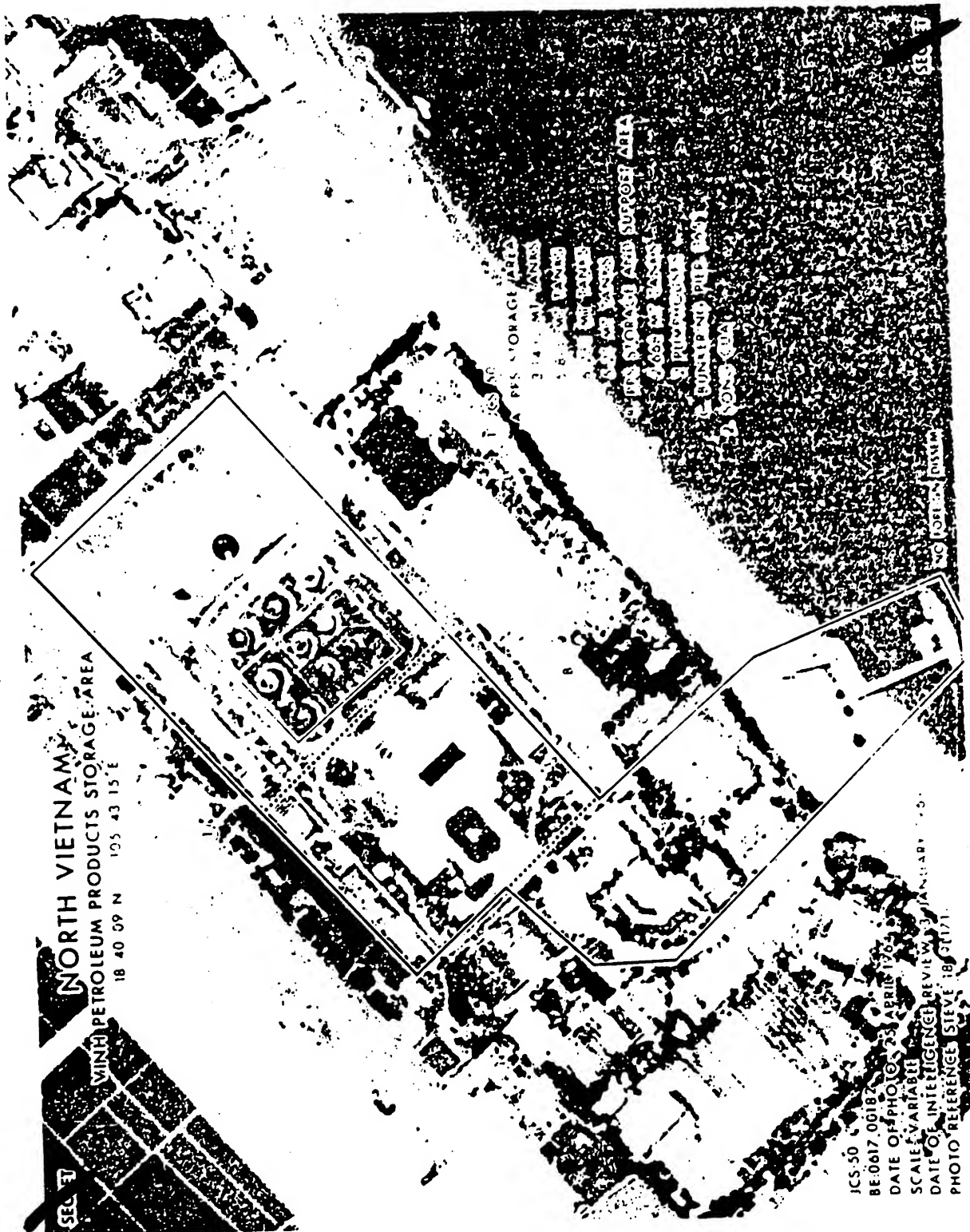
A-C-BC-4

(Revised by 17th Note to Holders)

Tab BC to
Annex C to
Appendix A

TAB ED TO ANNEX C TO APPENDIX A

TARGET NO. 50



A-C-BD-1

Tab BD to Annex C
to Appendix A

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Classified by 6032 (U/H)

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 50 1
2. B. E. NUMBER: 617-0182 2
3. IDENTIFICATION: Vinh Petroleum Products Storage 3
4. DATE OF INFORMATION: 31 December 1968 4
DATE OF TISD: 11 March 1969 5
DATE OF PHOTOGRAPHY: 25 April 1964 6
DATE OF INTELLIGENCE REVIEW: 3 January 1969 7
5. LOCATION: 13-40-09N 105-43-15E, located 3 NM E of Vinh. 8
6. DESCRIPTION: The target area contains 3 large, 5 medium, 9
and 6 small cylindrical tanks, 5 bullet tanks, and 2 medium underground 10
cylindrical tanks. There are 8 major and 11 minor support buildings, 11
2 pumphouses, and a bunkering pier. The target area is enclosed by 12
a fence. 13
7. SIGNIFICANCE: This target is the 3rd largest POL Storage 14
Depot in NVN, with a storage capacity of 12,270 metric tons. Located 15
in the southern part of the country, this depot plays a key role in the 16
staging of transport-supply operations into South Vietnam and Laos. 17
8. TARGET ENVIRONMENT: The target is 6' above sea level, 18
5 NM inland, and 3 NM E of Vinh. It is situated on the N side of a bend 19
where the Song Ca is 1,450' wide. There is a large island in the river 20
opposite the depot, and the depot area is surrounded by a levee. The 21
terrain in the target area consists of sparsely wooded beach ridges, 5' 22
to 10' high. Low areas between the ridges contain wetland rice, grave 23
mounds, and scattered areas of brush. 24
9. DEFENSE ENVIRONMENT: 25
 - a. The target is within the SAM envelope. 26
 - b. AAA activity has been identified within 3NM of the target. 27
 - c. HMG and small arms fire is anticipated. 28
10. DAMAGE OBJECTIVE: Destruction of stored POL. Damage 29
criterion is rupture of storage tanks and distortion of exposed piping 30
and equipment. Firing of spilled contents will enhance disability. 31
11. EFFECT ON NVN: Loss of this storage facility would leave 32
the southern provinces of the country with no bulk POL storage and 33
force reliance on packaged and drummed stocks and POL barges. 34

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A-C-BD-2

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Tab BD to
Annex C to
Appendix A

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12. RECUPERABILITY: Restoration of this target to full pre-strike capability would require several months. North Vietnam is not known to be manufacturing tank components, appropriate steel tubing, piping, pumps, or other items basic to the construction or maintenance of POL storage facilities of this type. The existing reliance on imported materials and skills is expected to continue indefinitely. Although pre-fabricated tanks of Soviet design can be installed on a prepared site in about a week, it appears unlikely that either the Soviets or the Chinese could place all the necessary elements together in less than 4 weeks.

13. COLLATERAL DAMAGE:

a. Light damage to surrounding area.

b. Population Casualties*

Target Area		Adjacent Area		Target Area		Adjacent Area	
Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ
3	0	6	70	0	0	0	1

*Casualties estimated under daylight alert conditions.

14. RECOMMENDED WEAPONS AND SORTIES:

The target consists of 3 areas. Weapons and sorties have been computed for one area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required to achieve "over target" requirements are also shown.

(1) In order to achieve a damage level of 30%, weapons/sorties required over target:

WEAPON	250# <u>SNAKEYE</u>	500# or <u>SNAKEYE</u>	500# <u>BOMB</u>	750# or <u>BOMB</u>
Area A (320' x 210')	33/3	26/3	52/6	44/7

(2) Weapons/sorties operationally required to achieve "over target" requirements shown above:

40/3	32/4	63/7	53/10
------	------	------	-------

(3) In order to achieve a damage level of 70%, weapons/sorties required over target:

WEAPON	250# <u>SNAKEYE</u>	250# <u>BOMB</u>	500# <u>BOMB</u>	750# <u>BOMB</u>
Area A	111/9	85/9	174/19	148/25

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A-C-BD-3

(Revised by 17th Note to Holders)

Tab BD to
Annex C to
Appendix A

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(4) Weapons/sorties operationally required to achieve
"over target" requirements shown above:

134/11

102/11

209/23

178/30

15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%

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A-C-BD-4

(Revised by 17th Note to Holders)

Tab BD to
Annex C to
Appendix A

1007 RV.2

552

TAB BE TO ANNEX C TO APPENDIX A

TARGET NO: 51

NORTH VIETNAM

NGUYEN KHE PETROLEUM PRODUCTS STORAGE

21 10.08 N 105 51 29 E



JCS 51

A - 16 UNDERGROUND BUNKERS

B - 24 ABOVE GROUND TANKS

C - 2 PARTIALLY UNDERGROUND TANKS

D - 3 HORIZONTAL TANKS

E - RAIL TANKER FILLING STATION AND LOADING RACK

F - SUPPORT AREA, 3 LARGE AND 15 SMALL BUILDINGS

21 BE 0616 04371, NGUYEN KHE PPS SOUTH

22 RAILROAD SEGMENT 5A

23 HIGHWAY-3, SEGMENT 3A

JCS 51
BE 1006 00030
DATE OF PHOTO: 3 MARCH 1966
SCALE: 1:6,540
DATE OF INTELLIGENCE REVIEW: 27 MAY 1969
PHOTO REFERENCE: BS 5140/VJ 227
REVIEWED BY 17th N(H)

NO FOREIGN DISSEM
A-C-BE-1

Tab BE To
Annex C To Appendix A

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 51 1
2. BE NUMBER: 616-0630 2
3. IDENTIFICATION: Nguyen Khe Petroleum Products Storage 3
4. DATE OF INFORMATION: 3 March 1966 4
DATE OF TISD: 10 June 1969 5
DATE OF PHOTOGRAPHY: 3 March 1966 6
DATE OF INTELLIGENCE REVIEW: 27 May 1969 7
5. LOCATION: 21-10-08N 105-51-29E, located 8.5 NM N of Ha Noi. 8
6. DESCRIPTION: The target area contains 13 vertical tanks of which 9 are partially underground and mounded, 16 underground protective storage bunkers, 3 probable horizontal tanks, a rail tanker loading facility, and several storage and barracks-type buildings. The facility is served by rail and road. 9
10
11
12
7. SIGNIFICANCE: This depot has a storage capacity of 7,500 metric tons, and is the 7th largest POL storage facility in the country, representing about 3% of the total national capacity. The target is believed to serve the military forces in northern provinces. 13
14
15
16
8. TARGET ENVIRONMENT: The target is located 8.5 NM N of Ha Noi at an elevation of about 40' above sea level. It is situated on a flat, rice-cultivated plain with numerous small villages. The meandering Song Ca flows generally W to E about 1.5 NM to the N. A long ridge extends NW from a point about 9 NM NNW of the target, and rises to over 5000'. 17
18
19
20
21
9. DEFENSE ENVIRONMENT: 22
 - a. The target is within the SAM envelope. 23
 - b. AAA activity has been identified within 3 NM of the target. 24
 - c. HMG fire and small arms is anticipated. 25
10. DAMAGE OBJECTIVE: Destruction of stored POL. Damage criterion is rupture of storage tanks and distortion of exposed piping and equipment. Firing of spilled contents will enhance disability. 26
27
28
11. EFFECT ON NVN: Loss of storage capability and stocks on hand at this facility would induce shortages of fuels in the northern provinces, and require rerouting of materials needed elsewhere. Additional burdens would be placed on other facilities in the Ha Noi area. 29
30
31
32

~~SECRET~~ NO FOREIGN DISSEM EXCLUDED FROM AUTOMATIC DOWNGRADING

A-C-BE-2

(Revised by 17th Note to Holders)

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12. **RECUPERABILITY:** Restoration of this target to full pre-strike capability would require several months if undertaken. North Vietnam is not known to be manufacturing tank components, appropriate steel tubing, piping, pumps, or other items basic to the construction or maintenance of PCL storage facilities. The existing reliance on imported materials and skills is expected to continue indefinitely. Although pre-fabricated tanks of Soviet design can be installed on a prepared site in about a week, it appears unlikely that either the Soviets or the Chinese could place all the necessary elements together in less than 4 weeks, even under emergency conditions.

13. **COLLATERAL DAMAGE:**

a. Insignificant

Population				Casualties*			
Target Area		Adjacent Area		Target Area		Adjacent Area	
Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ
12	0	339	95	1	0	3	1

*Casualties estimated under daylight alert conditions.

14. **RECOMMENDED WEAPONS AND SORTIES:**

This installation is comprised of 6 areas. Weapons and sorties have been computed for 3 of the areas. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target are also shown:

(1) In order to achieve a damage level of 30%, weapons/sorties required over target:

WEAPON	250# SNAKEYE	or	500# SNAKEYE	or	500# BOMB	or	750# BOMB
Area A (315' x 200')	19/2		15/2		31/3		25/4
Area B (175' x 175')	12/1		10/1		23/3		19/3
Area C (190' x 190')	30/3		22/2		50/6		39/7
Totals	61/6		47/5		104/12		83/14

(2) Weapons/sorties operationally required to achieve "over target" requirement shown above:

73/7	56/6	125/14	100/17
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(3) In order to achieve a damage level of 70%, weapons/sorties required over target:

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(Revised by 17th Note to Holders)

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WEAPON	250# SNAKEYE	or	500# SNAKEYE	or	500# BOMB	or	750# BOMB	1
								2
Area A	63/5		49/5		102/11		82/14	3
Area B	39/3		32/4		76/8		64/11	4
Area C	100/8		75/8		167/19		130/22	5
Totals	202/16		156/17		345/38		276/47	6
(4) Weapons/sorties operationally required to achieve "over target" requirement shown above:								7
								8
	242/19		187/20		414/46		331/56	9
15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%.								10

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A-C-BE-4

(Revised by 17th Note to Holders)

Tab BE to
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Appendix A

NORTH VIETNAM

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1. INTERIOR AREA
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NO FOREIGN DISSEM

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 51.1 1
2. BE NUMBER: 616-0662 2
3. IDENTIFICATION: Ha Gia Petroleum Products Storage SSW UG 3
4. DATE OF INFORMATION: 19 August 1966 4
DATE OF TIS: 25 September 1968 5
DATE OF PHOTOGRAPHY: 3 March 1966 6
DATE OF INTELLIGENCE REVIEW: 24 May 1968 7
5. LOCATION: 21-15-57N 105-50-17E, 14 NM N of Ha Noi and 3 NM 8
ENE of Phuc Yen Airfield. 9
6. DESCRIPTION: The target area contains 9 underground POL 10
tanks each 42 feet in diameter and 8 partially underground tanks 11
each 8 feet in diameter, dispersed in the hilly terrain. A 12
small barracks area is located just west of the tank area and 13
approximately 30 support buildings and facilities for loading 14
railroad tank cars and tank trucks are located just east of the 15
tank area. On the hillside, between the tanks and the support 16
area the words HO CHI MINH appear to have been inscribed by 17
clearing out the vegetation in the shape of the letters. The 18
depot is served by road and rail. There is a large storage area, 19
1.4 NM to the N, and an unidentified barracks type area, 3.1 20
NM to the NW, connected by a road network. 21
7. SIGNIFICANCE: This facility is the fifth largest POL 22
storage depot in North Vietnam, and the estimated capacity of 23
1,000 metric tons represents about 5 per cent of the country's 24
POL storage capacity. The target is believed to provide back-up 25
to the on-site storage facilities at the Phuc Yen Airfield and 26
may also serve other military forces in the northern regions. 27
As jet fighter aircraft have been identified as operating from 28
Phuc Yen Airfield, it is considered highly probable that jet 29
fuel may be among the products stored at the target depot. 30
8. TARGET ENVIRONMENT: The target is approximately 130 feet 31
above sea level, situated in the foothills at the southeastern end 32
of the mountain range that parallels the Song Lo (River Claire). 33
These foothills rise to about 1,000 feet above sea level 1.4 NM 34
northwest of the target area. Except for these hills to the northwest, 35
the target is surrounded by low wetland ricefields and many 36
scattered native villages. 37
9. DEFENSE ENVIRONMENT: 38
 - a. The target is within the SAM envelope. 39
 - b. AAA activity has been identified within 3 NM of 40
the target. 41
 - c. HMG and small arms fire is anticipated. 42

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NO FOREIGN DISSEM EXCLUDED FROM AUTOMATIC REGRADING

(Revised by 15th Note to Holders)

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10. DAMAGE OBJECTIVE: Destruction of stored POL. Damage criterion is rupture of storage tanks and distortion of exposed piping and equipment. Firing of tank contents will enhance disability. Damage level is 30 per cent.

11. EFFECT ON NVN: Loss of this facility would deny significant stocks of POL to all forces currently supported and probably reduce the reserve stocks available to Phuc Yen Airfield, thereby extending the line of resupply all the way to storage facilities at Ha Noi.

12. RECUPERABILITY: Restoration of this target to full pre-attack capability would require many months and heavy outside assistance, probably from China. North Vietnam is not known to be manufacturing tank components appropriate steel tubing, piping, pumps, or other items basic to the construction or maintenance of POL storage facilities. It is expected that a high priority would be assigned to the repair activities due to the significance of the facility.

13. COLLATERAL DAMAGE:

a. Insignificant

b. Population

Casualties*

Target Area		Adjacent Area		Target Area		Adjacent Area	
Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ
50	90	16	110	3	5	0	1

* Casualties estimated under daylight alert conditions

14. RECOMMENDED WEAPONS AND SORTIES:

This target is comprised of 3 areas. One area (with two sub-areas) has been delineated for weapons application; weapons and sorties have been computed for this area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target are also shown:

(1) In order to achieve a damage level of 30%, weapons/sorties required over target:

WEAPON	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	750# BOMB
Area B-1 (50 x 250)	9/1		35/3		25/3		23/4
Area B-2 (350 x 750)	55/5		83/7		59/7		55/9
Totals	64/6		118/10		84/10		78/13

(2) Weapons/sorties operationally required to achieve "over target" requirements shown above:

78/7	144/12	102/12	95/16
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(3) In order to achieve a damage level of 70%, weapons/
sorties required over target:

WEAPON	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	750# BOMB	1 2 3 4 5 6
Area B-1	31/3		119/10		85/10		78/13	
Area B-2	186/16		281/24		200/22		186/31	
Totals	217/19		400/34		285/32		264/44	

(4) Weapons/sorties operationally required to achieve
"over. target" requirements shown above:

265/23	488/41	348/39	322/54	7 8 9
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15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%.

10

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3

#51.1

(Revised by 15th Note to Holders)

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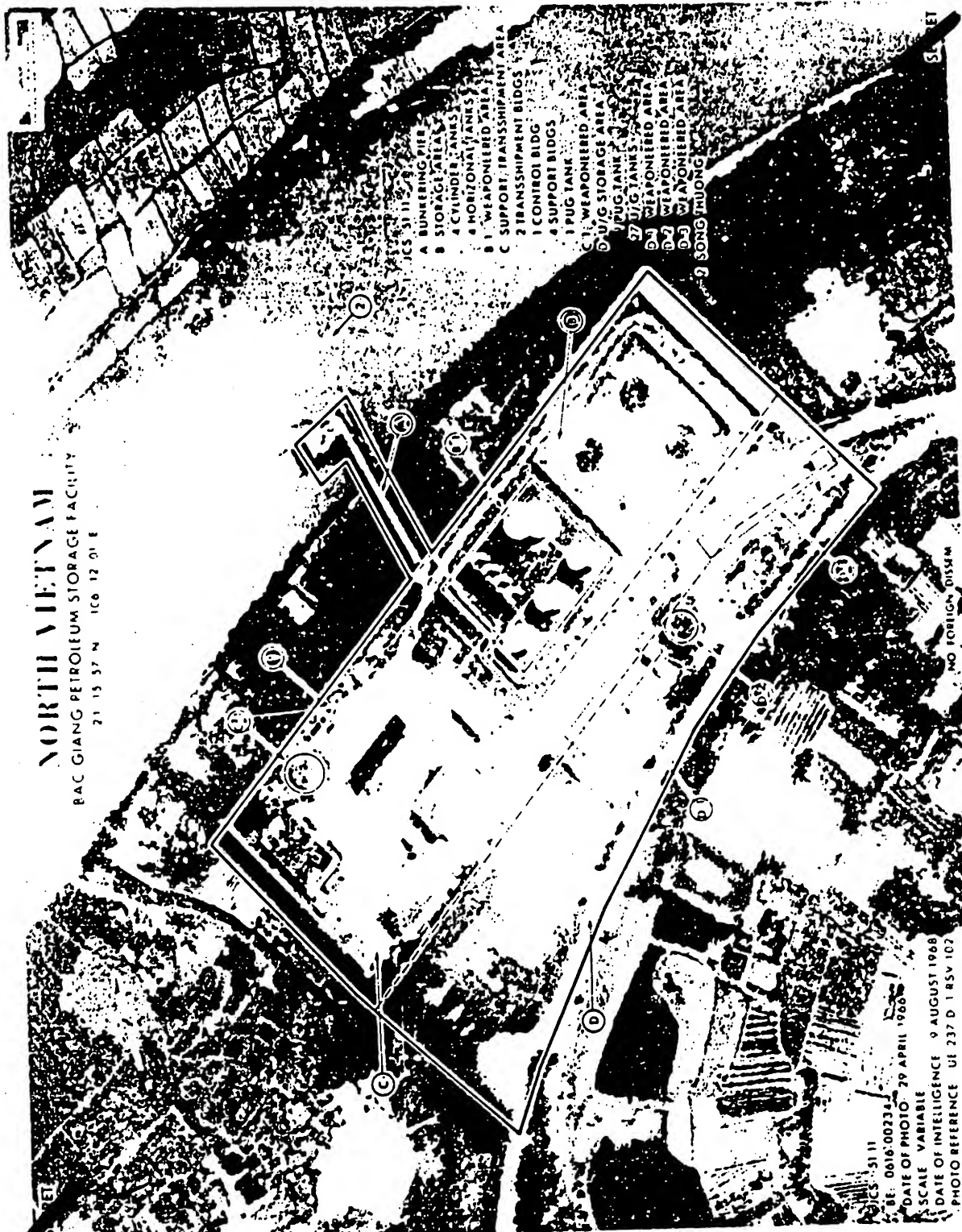
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NORTH VIETNAM

BAC GIANG PETROLEUM STORAGE FACILITY

21 15 37 N 106 12 01 E



1. BE: 0616-0023J
 2. DATE OF PHOTO: 29 APRIL 1966
 3. SCALE: VARIABLE
 4. DATE OF INTELLIGENCE: 9 AUGUST 1968
 5. PHOTO REFERENCE: UI 237 D 145V 102

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 51.11
2. BE NUMBER: 616-0234
3. IDENTIFICATION: Bac Giang Petroleum Products Storage
4. DATE OF INFORMATION: 9 August 1968
DATE OF TIS: 7 October 1968
DATE OF PHOTOGRAPHY: 29 April 1966
DATE OF INTELLIGENCE REVIEW: 14 August 1968
5. LOCATION: 21-15-57N 106-12-01E, located 27 NM NE of Ha Noi.
6. DESCRIPTION: This facility consists of four areas. Area A is a bunkering pier. Area B is a storage area and consists of 4 cylindrical tanks, each 27-foot diameter, and 4 horizontal tanks. Area C is support/transshipment area and consists of 1 control building, 2 transshipment buildings, 4 support buildings and 1 PUG vertical tank of undetermined size. Area D is an U/G storage area and consists of 27 U/G horizontal tanks and 1 PUG vertical tank of undetermined size. This facility is served by road and rail. The entire target area is fenced.
7. SIGNIFICANCE: This facility is a key point in the distribution of POL to the northeastern provinces. With a capacity of 2,140 metric tons, this facility serves as a transshipment point for products moving northward, as well as a distribution center for the Bac Giang area.
8. TARGET ENVIRONMENT: Target, 10 feet above sea level, is at SW of Bac Giang, on N bank of a bend in Song Thuong (river). Flow of Song Thuong is generally SE. Levee, topped by a road, runs along N side of target, parallel to river. Opposite stream bank also bordered by levee. Target on generally flat plains cultivated in wetland rice; plains contain scattered, low, terraced hillocks and many small villages. Narrow E-W trending bank of grass and brush-covered hills break plains 2.3 NM S of target. Highest hilltop 860 feet above sea level. Grassy hill reaching 400 feet above sea level is located 3.3 NM NW of target.
9. DEFENSE ENVIRONMENT:
 - a. The target is within the SAM envelope.
 - b. AAA activity has been identified within 3 NM of the target.
 - c. HMG and small arms fire is anticipated.
10. DAMAGE OBJECTIVE: Destruction of stored POL. Damage criterion is rupture of storage tanks and distortion of exposed piping and equipment. Firing of spilled contents will enhance disability.
11. EFFECT ON NVN: Loss of this facility and the stocks on hand will disrupt the flow of POL to the northeastern areas and deny supplies to consumers in the Bac Giang area.

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(Revised by 15th Note to Holders)

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12. RECUPERABILITY: Restoration of this target to full, pre-strike capability would require a period of several months or possibly much longer. North Vietnam is not known to be manufacturing tank components, appropriate steel tubing, piping, pumps, or other items basic to the construction or maintenance of POL storage facilities of this type. The existing reliance on imported materials and skills is expected to continue indefinitely. Although prefabricated tanks of Soviet design can be installed on a prepared site in about a week, it is unlikely that either the Soviets or the Communist Chinese could place all the necessary elements together in less than four weeks.

13. COLLATERAL DAMAGE:

a. Insignificant

Population				Casualties*			
Target Area		Adjacent Area		Target Area		Adjacent Area	
Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ
0	25	0	60	0	2	0	1

*Casualties estimated under daylight alert conditions

14. RECOMMENDED WEAPONS AND SORTIES:

The target consists of four areas, including five sub-areas which have been delineated for weapons application.

(1) In order to achieve a damage level of 30%, weapons/sorties required over target:

WEAPON	500# SNAKEYE	or	750# BOMB
D-1 (140 x 110)	14/2		38/6
C-1 (60' Diameter)	4/1		13/2
D-1 (95 x 75)	12/1		39/7
D-2 (60' Diameter)	4/1		13/2
D-3 (150 x 30)	13/1		43/7
TOTAL	47/4		146/24

(2) Weapons/Sorties operationally required to achieve "over target" requirements shown above:

TOTALS	57/6	176/29
--------	------	--------

(3) In order to achieve a damage level of 70%, weapons/sorties required over target.

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A-C-BPa-3

(Revised by 15th Note to Holders)

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WEAPON	500# SNAKEYE	or	750# BOMB	
Area B-1	47/5		126/21	1
Area C-1	11/1		42/7	2
Area D-1	40/4		132/22	3
Area D-2	11/1		42/7	4
Area D-3	44/5		145/24	5
TOTAL	153/16		487/81	6
(4) Weapons/sorties operationally required to achieve "over target" requirements shown above:				7
TOTAL	184/20		585/98	8
15. <u>PROBABILITY OF ACHIEVING DESIRED DAMAGE CRITERION:</u>				9
				10
				11
				12

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A-C-HPa-4

#51.11

(Added by 15th Note to Holders)

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TARGET INFORMATION SHEET

1. TARGET NUMBER: 51.12 1
2. BE NUMBER: 616-0117 2
3. IDENTIFICATION: Nam Dinh Petroleum Products Storage 3
4. DATE OF INFORMATION: 11 October 1966 4
DATE OF TARGET PHOTO: 15 June 1965 5
DATE OF TIS: 13 September 1968 6
DATE OF INTELLIGENCE REVIEW: 22 July 1968 7
5. LOCATION: 20-24-43N 106-10-39E 8
6. DESCRIPTION: This facility contains 7 cylindrical tanks ranging in size from 41 to 65 feet diameter, and 4 horizontal tanks about 10 to 12 feet in diameter. Support facilities include 1 large warehouse and 2 smaller buildings. The target is served by road, rail and probably by river barge. The entire target is fenced. 9-13
7. SIGNIFICANCE: This target, with an estimated storage capacity of 11,020 metric tons, is a key facility in the POL distribution system serving the southern provinces. POL supplies for the Viet Cong and Pathet Lao forces possibly move through this facility. 14-17
8. TARGET ENVIRONMENT: Target, at near sea level, located at SE edge of Nam Dinh (town), on W bank of Nam Dinh Giang (stream). Target area is an extensive flat minutely compartmented, rice-cultivated plain, crossed by N-S oriented Nam Dinh Giang and many smaller tributaries; numerous small villages, with local tree cover dot the plain. Principal roads converge on Nam Dinh town from all directions; N-S oriented road on W bank of Nam Dinh Giang passes through target site. Limestone ridges, about 1500 ft. above sea level, are 15 nm W of target, at rim of plain. Gulf of Tonkin is 18 nm SE of target across flat coastal plain. 18-26
9. DEFENCE ENVIRONMENT: 27
 - a. The target is within the SAM envelope. 28
 - b. AAA activity has been identified within 3 NM of the target. 29
 - c. HMG and small arms fire is anticipated. 30
10. DAMAGE OBJECTIVE: Destruction of stored POL. Damage criterion is rupture of storage tanks and distortion of exposed piping and equipment. Firing of spilled contents will enhance disability. 31-33
11. EFFECT ON DRV: Loss of this facility and the stocks on hand would disrupt the flow of POL to the Viet Cong, Pathet Lao and other consumers in the southern provinces, and remove significant transshipment facilities connecting these provinces with the sources of supply in Ha Noi and Hai Phong. 34-38
12. RECUPERABILITY: Restoration of this target to full, pre-strike capability would require several months or longer and involve the use of heavy equipment. North Vietnam is not known to be manufacturing tank components, appropriate steel tubing, piping, pumps, or other items basic to the construction or maintenance of POL storage facilities of this magnitude. 39-44

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(Revised by 15th Note to Holders)

A-C-147-2

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13. COLLATERAL DAMAGE:

a. Light damage to surrounding area.

b. POPULATION

CASUALTIES*

TARGET AREA		ADJACENT AREA		TARGET AREA		ADJACENT AREA	
Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ
0	45	0	160	0	3	0	2

* Casualties estimated under daylight alert conditions.

14. RECOMMENDED WEAPONS AND SORTIES:

This target is comprised of four areas, three of which have been delineated for weapons application. Weapons and sorties have been computed for each sub-area. To show the effort required to achieve the damage levels prescribed, total weapons/sorties required over the target are also shown:

(1) In order to achieve a damage level of 30%, weapons/sorties required over target:

WEAPONS:	500# SNAKEYE	750# BOMB
Area A (310x65)	5/1	14/2
Area B (280x41)	8/1	26/4
Area C (57x27)	13/1	42/7
Totals:	26/3	82/13

(2) Weapons/Sorties operationally required to achieve "over target" requirements shown above:

Totals:	32/4	99/17
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(3) In order to achieve a damage level of 70%, weapons/sorties required over target:

WEAPONS:	500# SNAKEYE	750# BOMB
Area A	15/2	47/8
Area B	25/3	86/14
Area C	42/5	141/24
Totals:	82/10	274/46

(4) Weapons/Sorties operationally required to achieve "over target" requirements shown above:

Totals:	99/11	329/55
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15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 51.13 1
2. BE NUMBER: 616-0081 2
3. IDENTIFICATION: Do Son Petroleum Storage 3
4. DATE OF INFORMATION: 14 July 1966 4
DATE OF TIS: 20 June 1966 5
DATE OF PHOTOGRAPHY: 4 September 1965 6
DATE OF INTELLIGENCE REVIEW: 21 September 1965 7
5. LOCATION: 20-42-26N 106-47-53E UTM XH 868906 8
6. DESCRIPTION: This installation previously consisted of two areas, 9
the original area near the shore and a new inland area. The original 10
area (Area A) contains two PUG cylindrical storage tanks, one of 55 11
foot diameter, and one of 50 foot diameter; these tanks are surrounded 12
by firewalls. This area also includes at least two support buildings, 13
two probable small tanks, 10 feet - 15 feet diameters, and is road and 14
possibly water served. The second area (Area B), which consists of 15
one 70 foot diameter cylindrical tank and several buildings, has sub- 16
sequently been identified as a water treatment plant and is no longer 17
considered to be a part of the POL storage facility. 18
7. SIGNIFICANCE: This facility with an estimated capacity of 4,000 19
metric tons is believed to support household and other civilian consum- 20
ers in the peninsular area as well as any military forces nearby. The 21
facility may have a very limited barge or coastal tanker loading 22
capability and might also support operations at the adjoining airfield 23
should it be reactivated. 24
8. TARGET ENVIRONMENT: The target is on the irregularly- 25
shaped peninsula which extends 3.5 NM southeast into the Gulf of 26
Tonkin. The peninsula, 300 feet to 1.5 NM wide, is composed of flat, 27
rice-covered plains, with rounded, terraced hills 100 to 400 feet high. 28
occupying most of its southern part. The target area is near a cliff 29
with nearby hills reaching to 425 feet above sea level. Cultural features 30
are moderately dense. The town of Do Son is approximately 0.4 NM 31
northwest of the target. 32
9. DEFENSE ENVIRONMENT: 33
 - a. Thirteen SAM sites have been identified within SA-2 missile 34
range (17.5 NM) of the target, and 9 additional SAM sites have been 35
identified 18-30 NM distant. 36
 - b. Identified AAA activity in the Do Son area includes 2 active 37
AAA sites, consisting of 8 occupied 57/85-mm revetments and 4 occupied 38
37-mm revetments. In addition, there is 1 inactive site in the area. 39
(DOI: 12 November 1965) 40
 - c. Moderate HMG and small arms fire is anticipated as trenching, 41
numerous AW positions and foxholes are evident in the immediate 42
vicinity of this target. 43

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10. DAMAGE OBJECTIVE: Destruction of stored POL. Damage criterion is rupture of storage tanks and distortion of exposed piping and equipment. Firing of spilled contents will enhance disability.

11. EFFECT ON NVN: Loss of this facility and stocks on hand would disrupt the flow of POL to consumers in the peninsular area, and induce reliance on packaged stocks at reduced rates, or on direct supply from Hai Phong.

12. RECUPERABILITY: Restoration of the target to full pre-strike capability would require a period of several months or possibly much longer. North Vietnam is not known to be manufacturing tank components, appropriate steel tubing, piping, pumps or other equipment basic to the construction or maintenance of POL storage facilities. The existing reliance on imported materials and skills is expected to continue indefinitely. Although prefabricated tanks of Soviet design can be installed on a prepared site in about a week, it is unlikely that either the Soviets or the Communist Chinese could place all the necessary elements together in less than 4 weeks.

13. COLLATERAL DAMAGE:

a. Insignificant

Population				Casualties*			
Target Area		Adjacent Area		Target Area		Adjacent Area	
Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ
0	0	0	100	0	0	0	1

*Casualties estimated under daylight alert conditions.

14. RECOMMENDED WEAPINS AND SORTIES:

a. In order to achieve a damage level of 30%, weapons/sorties required over target:

WEAPON	250#	or	250#	or	250#	or	500#	or	750#
	SNAKEYE		BULLPUP		BOMB		BOMB		BOMB
(50x200)	8/1		5/3		29/2		21/2		19/3

b. Weapons/sorties operationally required to achieve "over target" requirement shown above:

10/1	6/3	35/4	26/3	23/4
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c. In order to achieve a damage level of 70%, weapons/sorties required over target:

WEAPON	250#	or	250#	or	250#	or	500#	or	750#
	SNAKEYE		BULLPUP		BOMB		BOMB		BOMB
	27/2		17/9		98/8		71/8		64/11

d. Weapons/sorties operationally required to achieve "over target" requirement shown above:

33/3	21/11	120/10	87/10	78/13
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15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%

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A-C-BFc-3

Tab BFc to
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Appendix A

(Revised by 8th Note to Holders)

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TA 171 - AREA 1 - AIRPORT A

TARGET NO. 1114



NO FOREIGN DISSEM

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to Appendix

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 51.14 1
2. BE NUMBER: 616-0319 2
3. IDENTIFICATION: Viet Tri Petroleum Products Storage 3
4. DATE OF INFORMATION: 12 May 1966 4
DATE OF TIS: 20 June 1966 5
DATE OF PHOTOGRAPHY: 14 February 1965 6
DATE OF INTELLIGENCE REVIEW: 21 April 1965 7
5. LOCATION: 21-17-46N 105-26-08E, UTM WJ 453547 8
6. DESCRIPTION: This facility consists of 9 tanks including 1 9
underground tank of about 50 foot diameter. The other tanks range in 10
size from 15 to 45 feet in diameter. There are 3 support buildings, one 11
of which serves as a drum storage warehouse. The facility is served 12
by road and rail, and may have a small barge landing nearby. 13
7. SIGNIFICANCE: This facility, with a storage capacity of at 14
least 4,000 metric tons, is a key transshipment point for POL supply 15
movements to the northwestern regions. 16
8. TARGET ENVIRONMENT: Target is about 30 ft. above sea level 17
and is located in the town of Viet Tri. It is about 0.2 NM N of the 18
confluence of the Red River and the Riviere Claire. The terrain sur- 19
rounding the target is generally flat and planted to wetland rice. Many 20
small villages occupy the slightly raised areas. A rail yard 850 feet 21
to the N has a spur line that extends S to the target. Target is also 22
served by several roads. A combination highway and railroad bridge 23
crosses the Riviere Claire about 0.7 NM ENE of the target. 24
9. DEFENSE ENVIRONMENT: 25
 - a. Eleven SAM sites have been confirmed within SA-2 missile 26
range (17.5 NM) of Viet Tri and 9 sites are located between 18-30 27
NM distant. 28
 - b. Identified AAA activity in the Viet Tri area includes 17 active 29
sites (22 occupied 37mm and 102 occupied 57mm/85mm revetments) 30
and 5 inactive AAA sites. (DOI: 21 July 1965-4 March 1966) 31
 - c. No military units are carried in the immediate vicinity of 32
Viet Tri; however, machine guns/small arms fire from local 33
security and militia elements would be anticipated. 34

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A-C-BFd-2

Tab BFD to
Annex C to
Appendix A

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10. DAMAGE OBJECTIVE: Destruction of stored POL. Damage criterion is rupture of storage tanks and distortion of exposed piping and equipment. Firing of spilled contents will enhance disability.

11. EFFECT ON NVN: Loss of this facility and stock on hand would disrupt the flow of POL to the northwestern regions and remove a significant transshipment point between these areas and the source of supply at Ha Noi.

12. RECUPERABILITY: Restoration of this target to full, pre-strike capability would require a period of several months or possibly much longer. North Vietnam is not known to be manufacturing tank components, appropriate steel tubing, piping, pumps, or other items basic to the construction or maintenance of POL storage facilities. The existing reliance on imported materials and skills is expected to continue indefinitely. Although prefabricated tanks of Soviet design can be installed on a prepared site in about a week, it appears unlikely that either the Soviets or the Communist Chinese could place all the necessary elements together in less than 4 weeks.

13. COLLATERAL DAMAGE:

a. Insignificant

b. Population

Casualties*

Target Area		Adjacent Area		Target Area		Adjacent Area	
Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ
0	25	0	100	0	2	0	1

*Casualties estimated under daylight alert conditions.

14. RECOMMENDED WEAPONS AND SORTIES:

a. In order to achieve a damage level of 30%, weapons/sorties required over target:

WEAPON	250#	or	250#	or	500#	or	750#	
	SNAKEYE		BOMB		BOMB		BOMB	
(150x300)	19/2		47/4		33/4		30/5	28

b. Weapons/sorties operationally required to achieve "over target" requirement shown above:

23/2	57/5	40/4	37/6	31
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A-C-BFd-3

Tab BFD to
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Appendix A

(Revised by 8th Note to Holders)

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c. In order to achieve a damage level of 70%, weapons/sorties required over target:

WEAPON	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	750# BOMB	
	64/5		158/13		111/12		101/17	3

d. Weapons/sorties operationally required to achieve "over target" requirement shown above:

78/7	193/16	135/15	123/21	6
------	--------	--------	--------	---

15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%. 7

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A-C-BFd-4

Tab BFd to
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Appendix A

(Revised by 8th Note to Holders)



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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 51.16 1
2. BE NUMBER: 617-1018 2
3. IDENTIFICATION: Phu Qui Petroleum Products Storage. 3
4. DATE OF INFORMATION: 6 May 1965 DATE OF TIS: 7 May 1965 4
5
5. LOCATION: 19-13-05N 105-21-15E, WG 372248 6
6. DESCRIPTION: Target is nearing final stages of construction, and upon completion will include 9 cylindrical steel tanks of 42 feet diameter. The tanks are roofed but sealing caps have not been installed. Tanks are not yet usable. Also present are 16 support buildings of various sizes, with 2 additional large buildings, under construction. The area is served by road. 7
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7. SIGNIFICANCE: Upon completion this facility will have a storage capacity of about 10,000 metric tons, and will be the 5th largest POL storage facility in the DRV representing approximately 6% of the total national capacity. 14
15
16
17
8. TARGET ENVIRONMENT: Target is about 230 ft. above sea level 38 nm NW of Vinh. It is situated in a narrow N-S orientated valley; valley floor is about 150 yards by 1300 yards long. Forested covered hills forming the valley walls rise above the target about 200 ft. on the E and about 250 ft. on the W. N of the target area forested rolling plains are interrupted in places by steep rounded hills. To the E and S is the partly forested, partly rice cultivated Song Con river plain. To the W, a rugged karst area forms an intricate pattern of steep sided hills and pinacles that rise to about 1000 ft. above sea level. Target is served by a branch road from the road that is west of and parallel to the Song Con. 18
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9. DEFENSE ENVIRONMENT 30
 - a. Within the target area are 3 active light (14.5-37mm) AAA sites containing 8 occupied and 4 possibly occupied positions. About 5 nm SE is an unoccupied 57/85mm site of 6 positions. 6 unoccupied coastal defense gun positions and a supporting trench network is at Cap Palaise, 21 nm SE. An FC radar is also here. 31
32
33
34
35
36
 - b. Within 22 nm SE are 3 EW radars and there are 3 others probably within 30 nm SW. 37
38
 - c. A/W fire can be anticipated from troops in Phu Qui Barracks area (approximately 3000). 39
40
10. DAMAGE OBJECTIVE: Destruction of stored POL. Damage criterion is rupture of storage tanks and distortion of exposed piping and equipment. Firing of spilled contents when tanks in use will enhance disability. 41
42
43
44
11. EFFECT ON DRV: Destruction of this facility will deny the establishment of a significant POL supply point for the 45
46

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A-C-BFf-2

Tab BFf to
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Appendix A

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southern regions of the NVN and require military forces in the area to rely on packaged storage or on more distant resupply sources.

12. RECUPERABILITY: Restoration of this target to full pre-strike capability would require several months or possibly a much longer time. North Vietnam is not known to be manufacturing tank components, steel tubing, piping, pumps, or other items basic to the construction or maintenance of POL storage facilities. Although pre-fabricated tanks of Soviet design can be installed on a prepared site in about a week, it is unlikely that either the Soviets or the Chinese could place all the necessary elements together in less than 4 weeks.

13. COLLATERAL DAMAGE: Insignificant.

14. RECOMMENDED WEAPONS AND SORTIES:

a. In order to achieve a damage level of 30%, weapons/sorties required over target:

Weapon:	250# <u>SNAKEYE</u>	or	250# <u>BOMB</u>	or	500# <u>BOMB</u>	or	750# <u>BOMB</u>
	14/1		41/3		30/3		28/5

b. Weapons/sorties operationally required to achieve "over target" requirements shown above:

17/2	50/4	36/4	34/6
------	------	------	------

c. In order to achieve a damage level of 70%, weapons/sorties required over target:

48/4	139/12	102/11	95/16
------	--------	--------	-------

d. Weapons/sorties operationally required to achieve "over target" requirements shown above:

58/5	169/14	125/13	110/20
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15. PROBABILITY OF ACHIEVING DAMAGE CRITERION: 50%

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A-C-BFF-3

Tab BFF to
Annex C to
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(Revised by 7th Note to Holders)

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TARGET NO. 54.17

NORTH VIETNAM
DUONG NHAM PETROLEUM PRODUCTS STORAGE UG
V. 4. 21 01 40 N 106 30 30 E


$$A-C-BF_2=1$$

1. The Board of Directors (BOD) of the company is responsible for the overall management and control of the company.

~~TOP SECRET~~

TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 51.17 1
2. BE NUMBER: 616-1176 2
3. IDENTIFICATION: Duong Nham Pet Prds Str UG 3
4. DATE OF INFORMATION: 14 July 1966 4
DATE OF TIS: 20 June 1966 5
DATE OF PHOTOGRAPHY: 28 July 1965 6
DATE OF INTELLIGENCE REVIEW: 31 Aug 1965 7
5. LOCATION: 21-01-46N 106-30-50E, UTM XJ 573260 8
6. DESCRIPTION: This facility is probably completed. Poor quality of recent photography precludes positive verification. Installation consists of 7 storage tanks, approximately 54 feet in diameter, which are recessed into a small hill beside the Song Kinh Thay. The supporting facilities consist of 13 buildings of which 6 are probably for the storage of packaged POL stocks. The facility probably includes some underground storage in small tunnels into the hillside. The facility is served by road, and probably is capable of receipt and/or delivery by the nearby river. 9-17
7. SIGNIFICANCE: This facility has a total estimated capacity of 14,000 metric tons, and is about the 3rd largest in the country. The location of this target, 13 NM NW of Hai Phong, and the hardness and configuration of the site, indicate this facility is of importance to activities in the Hai Phong area, and will probably serve as a reserve should the principal facilities at Hai Phong be damaged. 18-23
8. TARGET ENVIRONMENT: The target, about 30 ft. above sea level, is 13 NM NW of Hai Phong, at the base of a small hill. The steep-sided, brush-covered hill, reaching 300 ft. above sea level, is on the north side of the target and is surrounded by rice-cultivated plains. The plains extend many miles SE and SW of the target. Six NM NE of the target they are bounded by massive forested hills with peaks 1,700 ft. above sea level, and 5 NM NW of the target they are interfingered among hills reaching 450 to 650 ft. above sea level. Many small, isolated hills are scattered within 3 NM of the target. The Song Kinh Thay (River) flows SE 0.2 NM north of the target, and a road aligned NW/SE is located 0.3 NM SW of the target. A village is on the SW side of the road, 0.3 NM SW of the target. 24-35
9. DEFENSE ENVIRONMENT: 36
 - a. Nineteen SAM sites have been identified within SA-2 missile range (17.5 NM) of the target, and 24 additional SAM sites have been identified 18-30 NM distant. 37-39
 - b. There is no identified AAA activity in the immediate vicinity of the target. The nearest activity is in the Hai Duong area (6 active sites) approximately 6 3/4 NM. (DOI: 17 January 1965 - 10 April 1966) 40-42
 - c. Sparse HMG and small arms fire is anticipated. 43

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10. DAMAGE OBJECTIVE: Destruction of stored POL. Damage criterion is rupture of storage tanks and distortion of exposed piping and equipment. Firing of spilled contents will enhance disability.

11. EFFECT ON NVN: Loss of this facility would deny the NVN a strategic reserve base which plays a significant part in their attempt to establish a secondary distribution system.

12. RECUPERABILITY: Restoration of this target to full, pre-strike capacity would require a period of several months or possibly much longer. North Vietnam is not known to be manufacturing tank components, appropriate steel tubing, piping, pumps, or other items basic to the construction or maintenance of POL storage facilities. The existing reliance on imported materials and skills is expected to continue indefinitely. Although pre-fabricated tanks of Soviet design can be installed on a prepared site in about a week, it appears unlikely that either the Soviets or the Communist Chinese could place all the necessary elements together in less than four weeks, even under emergency conditions.

13. COLLATERAL DAMAGE:

a. None

b. Population

Casualties*

Target Area		Adjacent Area		Target Area		Adjacent Area	
Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ
0	5	0	20	0	0	0	0

*Casualties estimated under daylight alert conditions.

14. RECOMMENDED WEAPONS AND SORTIES:

The target consists of two areas. Weapons and sorties have been computed for each area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required to achieve "over target" requirements are also shown:

(1) In order to achieve a damage level of 30%, weapons/sorties required over target:

WEAPON	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	750# BOMB
Area A (200x700)	36/3		70/6		36/4		21/4
Area B (500x550)	40/3		48/4		36/4		33/5
Totals	76/6		118/10		72/8		54/9

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A-C-BFg-3

Tab BFg to
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(2) Weapons/sorties operationally required to achieve "over target" requirements shown above:

93/8 144/12 88/10 66/11

(3) In order to achieve a damage level of 70%, weapons/sorties required over target:

WEAPON	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	750# BOMB
Area A	122/10		237/20		122/14		71/12
Area B	136/11		163/13		122/14		112/19
Totals	258/21		400/33		244/28		183/31

(4) Weapons/sorties operationally required to achieve "over target" requirements shown above:

315/26 488/41 298/33 223/37

15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%

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A-C-BFg-4

Tab BFg to
Annex C to
Appendix A

(Revised by 8th Note to Holders)

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TAB BFh TO ANNEX C TO APPENDIX A

TARGET NO. 51.18



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(Revised by 10th N/IB)

A-C-BFh-1

Tab BFh to Annex C
to Appendix A

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 51.19 1
2. BE NUMBER: 616-1340 2
3. IDENTIFICATION: Can Thon Petroleum Products Storage 3
4. DATE OF INFORMATION: 19 August 1966 4
DATE OF TIS: 22 August 1966 5
DATE OF PHOTOGRAPHY: 16 August 1965 6
DATE OF INTELLIGENCE REVIEW: 22 September 1965 7
5. LOCATION: 21-23-35N 106-18-39E, UTM XJ 358661 8
6. DESCRIPTION: This facility contains 120 small horizontal tanks placed in 6 orderly rows. The tanks have been individually mounded over leaving vents and filler pipes exposed. The area also contains numerous exposed drums and is fenced. The facility is road served. 9
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7. SIGNIFICANCE: This facility, with an estimated capacity of 400 metric tons, could serve the airfield at Kep (JCS Tgt # 9.1) or North Vietnamese ground forces in this area. The target is less than 2 NM from the rail line connecting the Communist China transshipment facility at Ping Hsiang with Ha Noi and could serve as a small reserve base. 13
14
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17
8. TARGET ENVIRONMENT: Target, about 100 ft. above sea level, is 1.7 NM SE of Kep, in an area of many closely spaced hillocks which are separated by low areas planted to wetland rice. Hillocks are wooded and generally 80 ft. higher than intervening low areas. Target is located in a low area between hillocks. Hills being 1.0 NM ENE of target attain elevations up to 1,200 ft. within 5.0 NM of target. Highway and parallel rail line, aligned NNE-SSW, are 1.4 NM NW of target. 18
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9. DEFENSE ENVIRONMENT: 25
 - a. Fifteen SAM sites have been identified within SA-2 missile range (17.5 NM) of this target and 14 additional SAM sites are 18-30 NM distant. 26
27
 - b. No AAA defense activity has been identified in the immediate vicinity of this target; however, there are 25 active sites in the general Kep area (66 occupied 37mm and 92 occupied 57mm/85mm revetments). There are also 5 inactive sites in the Kep area. (DOM: 15 October 1965 - 3 June 1966) 28
29
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 - c. Moderate HMG and small arms fire is anticipated as there are at least 2 active military barracks installations in the Kep area. 33
34
10. DAMAGE OBJECTIVE: Destruction of stored POL. Damage criterion is rupture of storage tanks and distortion of exposed piping and equipment. Firing of spilled contents will enhance disability. Damage level is 30 per cent. 35
36
37
38

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11. EFFECT ON NVN: Destruction of this facility and the stocks on hand would not critically affect the NVN. Loss of the tanks themselves would probably be the most serious result, and rerouting of supplies would be required.

12. RECUPERABILITY: Restoration of the target could be accomplished in a very short time as the facilities are not fixed. Recovery time would depend on the availability of small tanks to replace those damaged, and the inclination of the North Vietnamese to continue use of the area for this purpose.

13. COLLATERAL DAMAGE:

a. None

Population				Casualties*			
Target Area		Adjacent Area		Target Area		Adjacent Area	
Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ
0	0	5	20	0	0	0	0

*Casualties estimated under daylight alert conditions.

14. RECOMMENDED WEAPONS AND SORTIES:

a. In order to achieve the damage level of 30%, weapons/sorties required over target:

WEAPON	250# SNAKEYE	or	500# BOMB	or	750# BOMB	or	1000# BOMB
Area A (200x350)	132/11		118/14		103/18		80/27

b. Weapons/sorties operationally required to achieve "over target" requirements shown above:

161/14	144/16	126/21	98/33
--------	--------	--------	-------

c. In order to achieve the damage level of 70%, weapons/sorties required over target:

WEAPON	250# SNAKEYE	or	500# BOMB	or	750# BOMB	or	1000# BOMB
Area A	445/38		398/45		347/58		270/90

d. Weapons/sorties operationally required to achieve "over target" requirements shown above:

543/46	485/54	423/71	329/110
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15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%.

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Tab BFh to
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NORTH VIETNAM



AS OF
IN 1964-1965
BANK OF PHOTO. 10. 10. 1964
SCHEMATIC MAP
SOUTH OF KINH GIANG RIVER
PHOTO 10. 10. 1964, 10. 10. 1964

~~TOP SECRET~~

TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 52 1
2. BE NUMBER: 617-0044 2
3. IDENTIFICATION: Vinh HQ MR IV, Army Bks and Supply Depot East 3
4. DATE OF INFORMATION: 16 January 1966 4
DATE OF TIS: 11 May 1966 5
DATE OF PHOTOGRAPHY: 16 January 1966 6
DATE OF INTELLIGENCE REVIEW: 18 March 1966 7
5. LOCATION: 18-39-50N 105-41-56E, UTM WF 733636, along Route 1 8
on SE outskirts of Vinh. 9
6. DESCRIPTION: This target consists of a group of associated buildings 10
in 4 adjoining areas. Included in the 4 targeted areas are 35 administration/ 11
barracks/support buildings, 15 administration/barracks buildings, 27 storage 12
buildings and 13 storage/support buildings. Present capacities are estimated 13
to be approximately 3,600 troops and 155,000 square feet of storage space. 14
7. SIGNIFICANCE: This installation is a major supply/support element 15
in the Vinh military complex, a major military center in southern North 16
Vietnam and site of the headquarters for Military Region IV. This may be 17
the major supply base for the 325th Infantry Division and Viet Cong support 18
in South Vietnam. In addition, the 341st Infantry Division (Coastal Defense), 19
the 271st and possibly the 269th Independent Infantry Regiments are located 20
in the vicinity of Vinh. Vinh is also a communications center of prime 21
importance, not only for MR IV but also for the command and control of 22
PL/VC operations. 23
8. TARGET ENVIRONMENT: Target is located on the coastal plain on 24
the eastern edge of the city of Vinh. This area is heavily populated and 25
adjacent areas are heavily cultivated. Target area is bordered on the NW 26
and SE by populated areas and on the SW and NE by cultivated fields. 27
9. DEFENSE ENVIRONMENT: 28
 - a. No SAM sites have been confirmed within 60 nm of Vinh; however, 29
there is strong evidence of the presence of at least one SA-2 battalion in 30
this area. There have been numerous aircrew reports of Fan Song lock- 31
ons in the coastal area between Vinh and Dong Hoi and 3 aircraft have 32
been lost, possibly to SAMs, in the Vinh area since 25 February. It is 33
probable that the suspect unit is a skeleton battalion (possibly operating 34
with as few as two or three launchers) moving from one unprepared site 35
to another on a "shoot and run" basis. 36
 - b. Vinh is the center of an extensive AAA network which includes 25 37
active 37mm sites, (93 occupied/15 unoccupied positions) 13 active 57mm/ 38
85mm sites, (78 occupied/20 unoccupied positions) and 3 active HMG sites 39
(9 occupied positions). In addition, there are 56 inactive 37mm sites 40
(260 positions) 35 inactive 57mm/85mm sites (266 positions) and 25 41
inactive HMG sites (102 positions). Five inactive sites are immediately 42
to the east and north of the target. 43

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A-C-BG-2

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c. Small arms and A/W fire may be provided by tactical units stationed in the Vinh area

10. DAMAGE OBJECTIVE: Destruction of stored materials. Damage criterion is structural damage to storage buildings. This will be accompanied by damage to contents. Damage level is 30 percent.

11. EFFECT ON NVN: Immediate effect on the logistical support to the PL/VC.

12. RECUPERABILITY: Depot operations could probably resume functioning on a piecemeal within 24-48 hours after infliction of damage utilizing locally available labor (civilian and military) for clearing debris, effecting emergency/expedient repairs, and performing limited operational duties of personnel lost. Sufficient civilian buildings are available in the immediate depot area to provide replacement floor space although loading and unloading operations would be hampered. Replacement of supplies lost is dependent upon: a. Availability of replacement supplies elsewhere in the country; b. Status of original sources of supplies, whether North Vietnamese or Communist Chinese; c. Condition of communications network servicing the depot area; d. National replenishment priorities established in response to overall infliction of damage. If supplies required are available elsewhere in North Vietnam or southern China and transport and priorities permit, supplies could probably be replaced in no more than an estimated 5-10 days.

13. COLLATERAL DAMAGE

a. Insignificant

b. Population

Casualties*

Target Area		Adjacent Area		Target Area		Adjacent Area	
Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ
3600	0	0	500	216	0	0	5

*Casualties estimated under daylight alert conditions.

14. RECOMMENDED WEAPONS AND SORTIES

This target is comprised of 4 areas. Weapons and sorties have been computed for each area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target are also shown:

(1) In order to achieve a damage level of 30%, weapons/sorties required over target:

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WEAPON:	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	500# BOMB	
Area A (550x1500)	90/8		113/9		77/9		49/8	1
Area B (450x950)	50/4		67/6		46/5		29/5	2
Area C (500x650)	73/6		96/8		49/5		29/5	3
Area D (250x750)	45/4		76/7		40/4		24/4	4
Totals	258/22		354/30		212/23		151/22	5

(2) Weapons/sorties operationally required to achieve "over target" requirement shown above: 6
7

315/26 432/36 259/29 160/27 8

(3) In order to achieve a damage level of 70%, weapons/sorties required over target: 9
10

WEAPON	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	750# BOMB	
Area A	304/25		382/32		260/29		166/28	11
Area B	169/14		226/19		156/17		98/16	12
Area C	246/21		324/27		166/18		98/16	13
Area D	152/13		263/22		135/15		81/14	14
Totals	871/73		1195/100		717/79		443/74	15

(4) Weapons/sorties operationally required to achieve "over target" requirement shown above: 16

1062/89 1457/121 874/97 540/90 17

15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50% 18

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A-C-BG-4

Tab BG to
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Appendix A

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TAB BH TO ANNEX C TO APPENDIX A

TARGET NO. 53



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TAB BH TO ANNEX C TO APPENDIX A

TARGET NO. 53



SECRET NOFORN
PHU VAN ARMY SUPPLY DEPOT SE

NORTH-VIETNAM
18° 21' N 106° 41' E

PRE STRIKE MSN WILIE 6

FE. W. 539

DATE 20 FEB 65

POST STRIKE MSN BT 2400

FR 3V-040 D62 046

DATE 19 MAR 65



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(Revised 31 August 1965)

A-C-BH-1a

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Appendix A

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 53 1
2. BE NUMBER: 0517-00122 2
3. IDENTIFICATION: Phu Van Army Supply Depot SE Di Luen 3
4. DATE OF INFORMATION: 3 March 1965 4
DATE OF TIS: 20 December 1965 5
5. LOCATION: 18-47-07N 105-20-16E; UTM 48Q WF 352767 6
(approximately 1 NM SW of Trung Phu Ha, 6.5 NM S of Vinh Son, 7
North Vietnam). 8
6. DESCRIPTION: Two adjacent secured (single security 9
fence) storage sites (A and B) on the east bank of the Song Ca 10
River. Area A contains nine warehouses and four support 11
buildings. Just to the south, Area B contains 17 storage/ 12
support buildings. The eastern edge of Area B contains 2 T- 13
shaped buildings, one of which is a probable administration 14
building. Directly south of Area B, 1/4 NM, a large 15
billetting area is located, containing 15 barracks and 5 16
storage/support buildings. Between, and immediately to the 17
west, of target areas A and B are approximately 12 additional 18
storage/support type buildings. 19
7. SIGNIFICANCE: Depot is part of a large military complex 20
in the Vinh Son area serving the 324th Inf Bde., (1 Jan 1965) 21
and located south of Route 7 between Routes 7 and 8, both of 22
which are main avenues for North Vietnamese support for opera- 23
tions in Laos. 24
8. TARGET ENVIRONMENT: Target is located in the generally 25
flat lowland bordering the Song Ca River. Surrounding area 26
contains numerous blocks of cultivated fields interspersed 27
with scattered civilian settlements. Two civilian settlements 28
are located immediately north and south of the supply depot. 29
A third settlement is adjacent to the southeast border of the 30
depot. 31
9. DEFENSE ENVIRONMENT: 32
- a. AAA defenses include 2 active 57/85mm sites (10 posi- 33
tions occupied, 2 positions unoccupied) 4 1/2 NM north- 34
northwest, an inactive 8-position site 3 NM north-northwest 35
(DOI: 20 Feb 65), and an inactive 4-position site 5 3/4 36
NM north of the target. (DOI: 23 Nov 64). 37
- b. Trench networks are evident near barracks areas to 38
south of target. The 324th Infantry Brigade, located in 39
several camps in this general area, is estimated to have a 40
strength of 5000. 41
- c. The target is located approximately equidistant 42
(20 NM) from radars at Cua Lo, Vinh, and Kim Cuong. 43

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A-C-BH-2

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10. DAMAGE OBJECTIVE: Destruction of stored materials. Damage criterion is structural damage to storage buildings. This will be accompanied by damage to contents. Damage level is 30 percent.

11. EFFECT ON DRV: Will limit support to the PL/VC and to the 324th Inf Bde in proportion to the criticality of stored supplies.

12. RECUPERABILITY: Depot operations could probably be resumed within 12-24 hours after infliction of damage utilizing locally available labor (civilian and/or military) for clearing debris, effecting emergency/expedient repairs, and performing limited operational duties of personnel lost. Sufficient civilian buildings are available in the immediate area of this depot to provide at least emergency cover for critical supply items on an immediate basis. Additional civilian buildings in the general depot area sufficient to replace storage areas damaged could be appropriated and become operational within an estimated 3-5 days, however, loading and unloading operations in these areas would be somewhat hampered. Replacement of supplies lost is dependent upon: a. Availability of replacement supplies elsewhere in the country. b. Status of original sources of supplies, whether North Vietnamese or Communist Chinese. c. Condition of communications network servicing the depot area. d. National replenishment priorities established in response to overall infliction of damage.

If supplies required are available elsewhere in North Vietnam or southern China and transport and priorities permit, supplies could probably be replaced in no more than an estimated 3-5 days.

13. COLLATERAL DAMAGE: Insignificant.

14. RECOMMENDED WEAPONS AND SORTIES:

a. This is a large target complex comprised of three areas. Weapons and sorties have been computed for each area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target is also shown.

(1) In order to achieve a damage level of 30% weapons/sorties required over target:

Weapon:	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	750# BOMB
Area A	54/5		93/8		48/5		28/5
Area B	108/9		126/11		65/7		38/6
Area C	60/5		83/7		42/5		25/4
TOTALS:	222/19		302/26		155/17		91/15

(2) Weapons/sorties operationally required to achieve "over target" requirement shown above:

270/23	368/32	189/21	109/18
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(3) In order to achieve a damage level of 70% weapons/sorties required over target:

Weapon:	250# <u>SNAKEYE</u>	or	250# <u>BOMB</u>	or	500# <u>BOMB</u>	or	750# <u>BOMB</u>	
Area A	182/15		312/26		160/18		95/16	3
Area B	364/30		425/35		218/24		128/21	4
Area C	202/17		280/23		142/16		84/14	5
TOTALS:	748/62		1017/84		520/58		307/51	6

(4) Weapons/sorties operationally required to achieve "over target" requirement shown above:

910/76	1240/102	634/71	374/62	9
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15. PROBABILITY OF ACHIEVING DAMAGE LEVEL: 50% 10

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A-C-EH-4

Tab BH to
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Appendix A

(Revised by 7th Note to Holders)

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SECRET



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A-1-1-1

RV-2

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 54 1
2. BE NUMBER: 617-0204 2
3. IDENTIFICATION: Thien Linh Dong Army Supply Depot South 3
4. DATE OF INFORMATION: 19 February 1965 4
DATE OF TIS: 29 April 1965 5
DATE OF PHOTOGRAPHY: 19 February 1965 6
DATE OF INTELLIGENCE REVIEW: 11 March 1965 7
5. LOCATION: 19-43-00N 105-42-50E, UTM 48Q WG 749501 8
(1 NM SSW of Thien Linh Dong, 1500 ft east of the rail line 9
from Thanh Hoa to Vinh, 7 NM SW of Thanh Hoa). 10
6. DESCRIPTION: This installation is oriented NW-SE 11
along the west bank of the Vi Giang River and consists of 12
three areas. Area A comprises the barracks and support area 13
and contains 3 barracks, 1 probable mess hall and 1 support 14
building. Estimated troop capacity is 273. Area B is an 15
unsecured area containing a probable motor pool with 3 16
associated buildings, 1 support building and 2 storage 17
structures. Area C is fence-secured and contains 3 triple- 18
bay and 4 single-bay warehouses, 1 administration building, 19
3 support buildings and 1 building of unknown function. An 20
additional small support building is located in the northeast 21
corner of the area but outside the target complex. 22
7. SIGNIFICANCE: This depot is adjacent to the only north- 23
south rail line and is capable of providing logistic support 24
to MR Right Bank and to MR IV to the south. 25
8. TARGET ENVIRONMENT: The depot is located in fairly 26
flat terrain with many streams in the area. There are small 27
villages in all directions from the depot and the land is 28
heavily cultivated. In the area around Thanh Hoa to the 29
north are elements of the 330th Infantry Brigade and an 30
unidentified transportation group. 31
9. DEFENSE ENVIRONMENT: 32
 - a. No AAA has been identified at the target location, 33
although 2 occupied 3-gun AW (prob 12.7mm) sites appear 34
in photography of 19 February 1965. Nearest known AAA 35
sites are associated with the area defense of Thanh Hoa, 36
which city is located approximately 6 3/4 NM northeast of 37
the target. Thanh Hoa defenses include 7 active and 38
1 inactive sites, amounting to 27 light (14.5mm-37mm) 39
occupied and 5 positions (4 "light" and 1 "57/85") 40
unoccupied. 41
 - b. In addition to troop capacity at the target 42
installation (para 6), the 269th Independent Infantry 43
Regiment and 57th Infantry Regiment of the 304 Division 44
are located nearby at Thanh Hoa. Additionally, the 486th 45
Coastal Security Battalion is located at Sam Son, where 46
3 occupied HMG (12.7mm) positions have been identified. 47
 - c. Within 5 NM of Thanh Hoa (1948N/10547E) are 2 radars, 48
a RUS-2 and a SCR-270. At My Duc, 10 NM northeast of Thanh 49
Hoa, there is a CROSS SLOT radar. 50

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A-C-BI-2

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10. DAMAGE OBJECTIVE: Destruction of buildings, stored material and accompanying personnel casualties. 1
2

11. EFFECT ON DRV: Could have immediate effect on logistic support to military regions IV and Right Bank. 3
4

12. RECUPERABILITY: With about 30% of destruction assumed, at least 4 days would be required to get back to near normal operations. Labor and materials are available in Thanh Hoa, but if general destruction in North Vietnam is assumed, it could take as long as 8 - 14 days to resume normal operations. 5
6
7
8
9

13. COLLATERAL DAMAGE: Light damage to surrounding area. 10

14. RECOMMENDED WEAPONS AND SORTIES: 11

This is a large target complex comprised of three areas. Weapons and sorties have been computed for each area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target are also shown: 12
13
14
15
16

(1) In order to achieve a damage level of 30%, weapons/sorties required over target: 17
18

WEAPON:	250# <u>SNAKEYE</u>	or	250# <u>BOMB</u>	or	500# <u>BOMB</u>	or	750# <u>BOMB</u>	
Area A	23/2		44/4		22/3		13/2	19
Area B	14/2		42/4		21/2		12/2	20
Area C	89/7		109/9		55/6		32/5	21
Totals	126/11		195/17		98/11		57/9	22

(2) Weapons/sorties operationally required to achieve "over target" requirement shown above: 23
24

154/13	238/21	119/13	70/11	25
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(3) In order to achieve a damage level of 70%, weapons/sorties required over target: 26
27

WEAPON:	250# <u>SNAKEYE</u>	or	250# <u>BOMB</u>	or	500# <u>BOMB</u>	or	750# <u>BOMB</u>	
Area A	78/7		149/12		75/8		44/7	28
Area B	48/4		142/12		71/8		41/7	29
Area C	300/25		368/31		186/21		108/18	30
Totals	426/36		659/55		332/37		193/32	31

(4) Weapons/sorties operationally required to achieve "over target" requirement shown above: 32
33

520/44	804/67	404/45	236/39	34
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15. PROBABILITY OF ACHIEVING DAMAGE LEVEL: 50% 35

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TARGET NO. 55



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(Revised 31 August 1965)

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 55
2. BE NUMBER: 617-0087
3. IDENTIFICATION: Vinh Son Army Supply Depot SW Bo Luong
4. DATE OF INFORMATION: 24 June 1965
DATE OF TIS: 20 December 1965
DATE OF PHOTOGRAPHY: 24 June 1965
DATE OF INTELLIGENCE REVIEW: 20 July 1965
5. LOCATION: 18-53-40N 105-17-44E, UTM WF 312595
6. DESCRIPTION: This depot is located 300 yards inshore on the south bank of the Ca River. There are three target areas within the facility. Area A contains 1 storage building and 1 support structure. Two other support buildings have been dismantled. Area B contains 7 warehouses; storage capacity is estimated at approximately 70,200 square feet. Area C contains 2 possible bulk storage shelters (8,100 sq ft).
7. SIGNIFICANCE: Depot is part of a large military complex in the overall Vinh Son area serving the 324th Inf Bde. (1 January 1965) and located south of Route 7 between Routes 7 and 8, both of which are main avenues for North Vietnamese support for operations in Laos.
8. TARGET ENVIRONMENT: Target is located in the generally flat lowland bordering the Song Ca River. Surrounding area contains numerous cultivated fields, dotted with scattered civilian settlements. Depot area is bounded on the north by a civilian settlement and on the south, east, and west by cultivated fields.
9. DEFENSE ENVIRONMENT:
 - a. AAA defenses within 4 NM radius of the target consist of 11 inactive sites (42 unoccupied 14.5mm/37mm positions, 16 unoccupied 57mm/85mm positions and 19 unoccupied HMG positions). In addition, there is one active HMG site (6 occupied positions). (DOI: 11 - 26 May 1965)
 - b. Trenching evident in area. The 324th Infantry Brigade, located in several camps in this general area, is estimated to have a strength of 5000.
 - c. The target is located approximately equidistant (20 NM) from radars at Cua Lo, Vinh, and Kim Cuong.
10. DAMAGE OBJECTIVE: Destruction of stored materials. Damage criterion is structural damage to storage buildings, accompanied by damage to contents, and personnel casualties. Damage level is 30 per cent.
11. EFFECT ON NVN: Would limit support to the PL/VC and to the 324th Inf Bde in proportion to the criticality of stored supplies.

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12. RECOVERABILITY: Limited depot operations could probably be resumed within 72 hours after infliction of damage. Sufficient civilian buildings are available near the area of this depot to provide at least emergency cover for salvaged or undamaged critical supply items. Civilian buildings in the general depot area are adequate to replace storage areas damaged and could be appropriated and restocked within an estimated 5 to 10 days.

13. COLLATERAL DAMAGE: Insignificant.

14. RECOMMENDED WEAPONS AND SORTIES:

This target is comprised of 3 areas. Weapons and sorties have been computed for each area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target area are also shown:

(1) In order to achieve a damage level of 30%, weapons/sorties required over target:

WEAPON:	250# <u>SNAKEYE</u>	or	250# <u>BOMB</u>	or	500# <u>BOMB</u>	or	750# <u>BOMB</u>	
Area A	9/1		34/3		17/2		10/2	12
Area B	21/2		43/3		22/2		13/2	13
Area C	11/1		33/3		17/2		10/2	20
Totals	41/4		110/9		56/6		33/6	21

(2) Weapons/sorties operationally required to achieve "over target" requirement shown above:

50/4	134/11	68/8	40/7	22
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(3) In order to achieve a damage level of 70%, weapons/sorties required over target:

WEAPON:	250# <u>SNAKEYE</u>	or	250# <u>BOMB</u>	or	500# <u>BOMB</u>	or	750# <u>BOMB</u>	
Area A	30/3		113/9		57/6		34/6	27
Area B	70/6		143/12		73/8		44/7	28
Area C	37/3		110/9		57/6		34/6	29
Totals	137/12		366/30		187/20		112/19	30

(4) Weapons/sorties operationally required to achieve "over target" requirement shown above:

167/14	446/37	228/25	137/23	31
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15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50% 34

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Tab BK TO ANNEX C TO APPENDIX A

TARGET No. 56



~~TOP SECRET~~
(Revised by 6th N/H)

A-C-BK-1

Tab BK TO Annex C
to Appendix A

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 56 1
2. BE NUMBER: 617-0151 2
3. IDENTIFICATION: Phu Qui Army Barracks and Supply Depot 3
4. DATE OF INFORMATION: 11 June 1965 4
DATE OF TIS: 16 June 1965 5
DATE OF PHOTOGRAPHY: 25 May 1965 6
DATE OF INTELLIGENCE REVIEW: 11 June 1965 7
5. LOCATION: 19-19-28N 105-25-38E, UTM WG 448368. 8
On W side of Song Hieu (river) at Phu Qui (Nghia Hung) 14.5 NM 9
NW of railroad 15.5 NM NW of Route 1, and 20 NM NW of port 10
facility at Thanh Dam. 11
6. DESCRIPTION: This installation comprises 12 groups 12
of barracks and storage areas spread over 300 acres. There 13
are 62 warehouse/storage-type structures with storage space 14
of 182,251 sq ft. This installation incorporates a training 15
area and there are numerous trenches and foxholes. 16
7. SIGNIFICANCE: Appears to be part of an important 17
storage complex comprising POL storage and ammo storage in 18
addition to this target. Important storage area for support 19
to Viet Cong and PAVN troops in the south. 20
8. TARGET ENVIRONMENT: The target is located on the W 21
bank of the Song Hieu in a broad alluvial valley. The area 22
is generally cultivated and is interspersed with low wooded 23
hills rising to 600 ft above the plain. Buildings of the 24
town of Phu Qui are adjacent to the target. 25
9. DEFENSE ENVIRONMENT: 26
 - a. Within 4 NM of target are 3 active light (14.5mm- 27
37mm) AAA sites containing 8 occupied and 4 possible 28
occupied positions. About 5 NM SE is an unoccupied 57mm/ 29
89mm site of 6 positions. Six unoccupied coastal defense 30
gun positions and a supporting trench network is at Cap 31
Falaise, 21 NM SE. An FC radar is also here. 32
 - b. Within 22 NM SE are 3 EW radars and there are 3
others probably within 30 NM SW. 33
34

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c. No AAA positions have been located immediately adjacent to the target but heavy small arms and AW fire can be anticipated from troops in the area (approximately 3000). Many trenches and foxholes have been prepared.

10. DAMAGE OBJECTIVE: Destruction of stored materials. Damage criterion is structural damage to buildings and accompanying damage to supplies. Damage level is 30 per cent.

11. EFFECT ON DRV: Immediate effect on logistical support to the VC and PAVN troops in the south.

12. RECUPERABILITY: Limited supply operations could probably resume functioning within 24 to 48 hours. Replacement of stores would require 3 to 5 days, depending upon priorities. Displaced troops could be housed in nearby civilian settlements or under canvas since there is ample space for field billeting.

13. COLLATERAL DAMAGE: Light damage to surrounding area.

14. RECOMMENDED WEAPONS AND SORTIES:

This is a large target complex comprised of seven areas. Weapons and sorties have been computed for each area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target are also shown:

(1) In order to achieve a damage level of 30%, weapons/sorties required over target:

WEAPON:	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	750# BOMB	
Area A	43/4		62/6		32/4		19/4	25
Area B	55/5		87/8		45/5		27/5	26
Area C	55/5		87/8		45/5		27/5	27
Area D	44/4		67/6		34/4		20/4	28
Area E	46/4		67/6		34/4		20/4	29
Area F	29/3		67/6		35/4		21/4	30
Area G	33/3		55/5		28/4		17/3	31
Totals	305/28		492/45		253/30		151/20	32

(2) Weapons/sorties operationally required to achieve "over target" requirement shown above:

372/31 902/101 309/35 185/31

(3) In order to achieve a damage level of 70%, weapons/sorties required over target:

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WEAPON:	<u>250#</u> <u>SNAKEYE</u>	or	<u>250#</u> <u>BOMB</u>	or	<u>500#</u> <u>BOMB</u>	or	<u>750#</u> <u>BOMB</u>	
Area A	145/13		209/18		108/12		64/11	1
Area B	185/16		293/25		152/17		91/16	2
Area C	185/16		293/25		152/17		91/16	3
Area D	148/13		226/19		115/13		68/12	4
Area E	155/13		226/19		115/13		68/12	5
Area F	98/9		226/19		118/14		71/12	6
Area G	111/10		185/16		95/11		58/10	7
Totals	1027/90		1658/141		855/97		511/89	8
(4) Weapons/sorties operationally required to achieve "over target" requirement shown above:								9
1253/105 2022/169 1043/116 624/104								10
15. <u>PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL:</u> 50%								11
								12

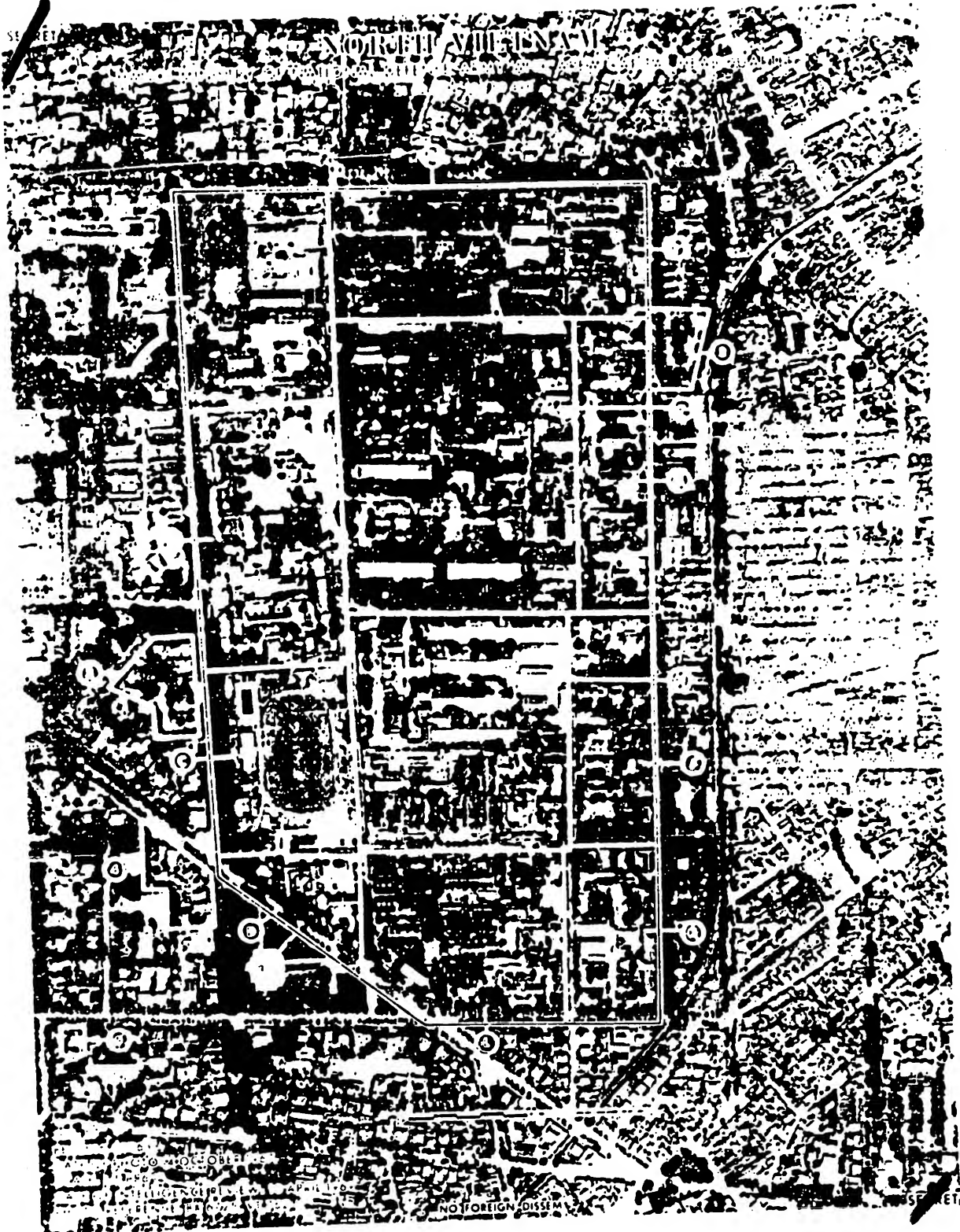
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TARGET NO. 57



Tab B1. To Annex C
To Appendix A

A-C-B1.1

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 57 1
2. B. E. NUMBER: 616-0063 2
3. IDENTIFICATION: Ha Noi Ministry of National Defense Army and Area Capital Hqs. 3
4
4. DATE OF INFORMATION: 30 May 1969 5
DATE OF TIS: 11 February 1970 6
DATE OF PHOTOGRAPHY: 4 October 1967 7
DATE OF INTELLIGENCE REVIEW: 10 April 1969 8
5. LOCATION: 21-02-00N 105-50-49E, 1000 yards N of the Ha Noi RR station. 9
6. DESCRIPTION: Target forms a 150 acre walled area approximately rectangular in shape and containing some 320 barracks, administration, storage, and support buildings. The facilities include an athletic field, swimming pool, 2 theaters, and numerous miscellaneous structures. Troop capacity is estimated at 9,600. 10
11
12
13
7. SIGNIFICANCE: The top level operational, political and logistical controls of the NVN defense establishment were concentrated in this target area. More recent information indicates that all headquarter elements except a few housekeeping units have been dispersed to other areas. 14
15
16
17
8. TARGET ENVIRONMENT: Target is located within the heavily built-up area of the NVN capital city of Ha Noi, surrounded by high density civilian populated areas as well as other military installations. The Ha Noi railroad station is approximately 1000 yards S, 2000 yards E is the Red River, and 1360 yards S is Bac Mai Airfield. Embassies of Poland (3), Communist China (4), and North Korea (5) are located to the W and SW of the target area. 18
19
20
21
22
23
9. DEFENSE ENVIRONMENT: 24
 - a. The target is within the SAM envelope. 25
 - b. AAA activity has been identified within 3 NM of the target. 26
 - c. HMG and small arms fire is anticipated. 27
10. DAMAGE OBJECTIVE: Destruction of administration, support buildings and barracks with resultant destruction of headquarters functions and facilities including communications equipment and loss of personnel. Damage to stored material. Damage level is 30%. 28
29
30
31
11. EFFECT ON NVN: Destruction of the target would impair command and control, communications, and direction of hostilities for all armed forces to the extent that these functions are exercised at this location. 32
33
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~~SECRET~~ NO FOREIGN DISSEM EXCLUDED FROM AUTOMATIC DOWNGRADING

A-C-BL-2

(Revised by 17th Note to Holders)

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12. RECUPERABILITY: Operational functions related to this target could probably resume on an extremely limited basis within 6-8 hours. Physical recuperability on a makeshift basis might be restored in 7-10 days. Losses of key personnel, if achieved, would take an indefinite time to replace.

13. COLLATERAL DAMAGE:

a. Light damage to surrounding area.

b. Population

Casualties*

Target Area		Adjacent Area		Target Area		Adjacent Area	
Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ
5000	0	1000	2500	300	0	10	25

*Casualties estimated under daylight alert conditions.

14. RECOMMENDED WEAPONS AND SORTIES:

This target is comprised of 11 areas. Nine areas have been delineated for weapons application. Weapons and sorties have been computed for each area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target are also shown:

(1) In order to achieve a damage level of 30%, weapons/sorties required over target:

WEAPONS	250# SNAKEYE	or	500# SNAKEYE	or	500# BOMB	or	750# BOMB
Area A (870'x545')	73/6		40/4		51/6		27/5
Area B (1070' x 485')	78/7		43/5		56/6		30/5
Area E (1280' x 490')	92/8		51/6		66/7		35/6
Area F (1110' x 940')	150/13		82/9		94/10		50/8
Area G (1230' x 285')	55/5		30/3		49/5		26/4
Area H (925' x 885')	121/10		66/7		77/9		41/7
Area J (695' x 310')	36/3		20/2		32/4		17/3
Area K (710' x 340')	40/3		22/2		33/4		18/3
Area L (805' x 635')	78/7		43/5		53/6		28/5
TOTALS	723/62		397/43		511/57		272/46

(2) Weapons/Sorties required to achieve "over target" requirements shown above:

TOTALS	868/74	476/52	613/68	326/55
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(3) In order to achieve a damage level of 70%, weapons/sorties required over target:

WEAPON	250# <u>SNAKEYE</u>	500# <u>SNAKEYE</u>	500# <u>BOMB</u>	750# <u>BOMB</u>
Area A	244/20	134/15	170/19	90/15
Area B	262/22	143/16	188/21	100/17
Area E	310/26	170/19	221/25	117/20
Area F	504/42	276/31	316/35	168/28
Area G	184/15	101/11	164/18	87/15
Area H	406/34	223/25	258/29	137/23
Area J	122/10	67/7	106/12	56/9
Area K	135/11	74/8	112/12	59/10

15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%

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(Revised by 17th Note to Holders)

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TAB BM TO ANNEX C TO APPENDIX A

TARGET NO. 58



~~TOP SECRET~~
(Revised by 10th N/H)

A-C-BM-1

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TARGET INFORMATION AND STIKE DATA

1. TARGET NUMBER: 58 1
2. BE NUMBER: 616-0299 2
3. IDENTIFICATION: Ha Noi Army Supply Depot S Quinh Loi 3
4. DATE OF INFORMATION: 12 August 1966 4
DATE OF TIS: 22 August 1966 5
DATE OF PHOTOGRAPHY: 27 January 1965 6
DATE OF INTELLIGENCE REVIEW: 5 March 1965 7
5. LOCATION: 20-59-48N 105-51-33E, UTM WJ 893223, 1.3 NM E of 8
Ha Noi/Bac Mai Airfield, approximately 2 NM S of Ha Noi. 9
6. DESCRIPTION: This target comprises 6 major storage areas 10
which are widely dispersed. These areas contain an aggregate of 11
approximately 170 warehouses/storage structures having an estimated 12
storage capacity of about 700,000 square feet. Approximately 145 13
barracks, administration and support buildings are in the immediate 14
vicinity of and associated with the storage facilities. An inter- 15
val road network and main arterial routes connect the storage areas. 16
7. SIGNIFICANCE: This large depot is a major storage facility 17
and is of particular significance due to its proximity to Ha Noi 18
and the Ha Noi/Bac Mai Airfield. No specific military unit has 19
been identified with this installation; however, the general Ha 20
Noi area includes Headquarters and elements of the 308th Infantry 21
Division, 350th Infantry Brigade, and the 351st Artillery Division. 22
8. TARGET ENVIRONMENT: This target is located in the flat in- 23
tensively cultivated Red River Delta region and is on the outskirts 24
of Ha Noi where civilian settlements and rice fields are inter- 25
spersed. Civilian settlements are immediately adjacent to all of 26
the 6 storage areas. 27
9. DEFENSE ENVIRONMENT: 28
- a. Eighteen SAM sites have been identified within SA-2 missile 29
range (17.5 NM) of the target, and 22 additional SAM sites have 30
been identified 18-30 NM distant. 31
- b. Identified AAA activity within 3 NM of the target includes 32
14 active AAA sites, consisting of 65 occupied 57mm/85mm revetments 33
and 15 occupied 37mm revetments. There are 9 inactive sites in the 34
immediate area and a total of 71 active sites in the entire Ha Noi 35
complex. (DOI: 4 July 1965 - 2 July 1966). 36
- c. Moderate to intense HMG and small arms fire is anticipated 37
throughout the Ha Noi area. 38

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A-C-BM-2

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Appendix A

(Revised by 11th Note to Holders)

10. DAMAGE OBJECTIVE: Destruction of storage buildings. Damage criterion is structural damage to storage buildings with accompanying personnel casualties and loss of stored material. Damage level is 30%. 1
2
3
4

11. EFFECT ON NVN: A 30% destruction level would result in a temporary reduction of support to military elements in the Ha Noi area and would eliminate significant covered and secure storage for new supplies coming into North Vietnam from Communist China. 5
6
7
8

12. RECUPERABILITY: The barracks portion of this complex could resume operations within 12 hours after damage, assuming field billeting is used and buildings in adjacent civilian areas are appropriated. Depot operations could probably be resumed within 24 hours using available military and civilian labor for clearing debris, setting up temporary canvas cover and performing operational duties of personnel lost. Partial replacement of supplies could probably be obtained from other depots in the Ha Noi area. Long-term replacement is dependent upon availability of supplies elsewhere in the country, original sources, and established replenishment priorities. If supplies are readily available and priorities permit, adequate replacement could probably be accomplished within 3 to 5 days. 9
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21

13. COLLATERAL DAMAGE: 22

a. Moderate damage to surrounding area. 23

b. Population				Casualties*				24
Target Area		Adjacent Area		Target Area		Adjacent Area		25
Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ	26
1200	0	3800	10,000	72	0	168	400	27

*Casualties estimated under daylight alert conditions. 28

14. RECOMMENDED WEAPONS AND SORTIES: 29

This is a large storage complex comprised of six areas. Five areas (with 5 sub-areas) have been delineated for weapons application. Weapons and sorties have been computed for each area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required to achieve "over target" requirement are also shown: 30
31
32
33
34
35

(1) In order to achieve a damage level of 30%, weapons/sorties required over target: 36
37

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WEAPON	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	750# BOMB	
Area A (250x400)	29/2		52/4		27/3		16/3	1
Area B-1 (100x350)	14/1		43/4		22/2		13/2	2
Area B-2 (210x360)	23/2		47/4		24/3		14/2	3
Area B-3 (250x360)	27/2		49/4		25/3		15/3	4
Area C-1 (320x550)	43/4		67/6		35/4		21/3	5
Area C-2 (550x650)	80/7		102/8		53/6		31/5	6
Area E (130x150)	13/1		35/3		18/2		11/2	7
Area F (300x400)	33/3		55/5		28/3		17/3	8
Totals	262/22		450/38		232/26		138/23	9

(2) Weapons/sorties operationally required to achieve "over target" requirement shown above: 10
11

320/27 549/46 283/32 168/28 12

(3) In order to achieve a damage level of 70%, weapons/sorties required over target: 13
14

WEAPON	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	750# BOMB	
Area A	98/8		175/15		91/10		54/9	15
Area B-1	48/4		145/12		74/8		44/7	16
Area B-2	78/7		158/13		81/9		48/8	17
Area B-3	91/8		165/14		85/9		51/8	18
Area C-1	145/12		226/19		118/13		71/12	19
Area C-2	270/22		344/29		179/20		105/18	20
Area E	44/4		118/10		61/7		37/6	21
Area F	111/9		185/15		95/11		58/10	22
Totals	885/74		1516/127		784/87		468/78	23

(4) Weapons/sorties operationally required to achieve "over target" requirement shown above: 24
25

1079/90 1849/155 956/107 571/96 26

15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50% 27

~~TOP SECRET~~

A-C-EM-4

Tab EM to
Annex C to
Appendix A

(Revised by 10th Note to Holders)

~~TOP SECRET~~

TAB BO TO ANNEX C TO APPENDIX A

TARGET NO. 60



~~TOP SECRET~~
(Revised by 9th N/H)

A-C-BO-1

Tab BO to Annex C
to Appendix A

TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 60 1
2. BE NUMBER: 616-0210 2
3. IDENTIFICATION: Thai Nguyen Army Supply Depot North 3
4. DATE OF INFORMATION: 14 July 1966 4
DATE OF TIS: 23 July 1966 5
DATE OF PHOTOGRAPHY: 3 March 1966 6
DATE OF INTELLIGENCE REVIEW: 12 April 1966 7
5. LOCATION: 21-38-25N 105-50-55E, UTM WJ 879929 8
6. DESCRIPTION: This depot is a walled storage area containing 36 9
regularly spaced warehouses with an estimated storage capacity of 390,000 10
square feet. In addition there are several support-type buildings; an 11
administrative area comprising 2 buildings is near the entrance gate. A 12
motor pool is located in the SE corner of the installation. None of the 13
warehouses appear to have loading areas for trucks. 14
7. SIGNIFICANCE: Headquarters Military Region Viet Bac is located 15
at Thai Nguyen and Headquarters and elements of the 312th Infantry Division 16
are also believed to be in the area. This depot appears to be the largest 17
single supply depot in North Vietnam. 18
8. TARGET ENVIRONMENT: Depot is located in cultivated lowlands 19
of the Song Thuong. There are hills with a high ridge to the SW, a 650-foot 20
ridge line 2.5 NM ESE, a 1760 foot peak 10.5 NM ENE and a 4550 foot peak 21
15 NM SW. Farming villages populate the river valley and a steel mill is 22
located at Thai Nguyen. 23
9. DEFENSE ENVIRONMENT: 24
 - a. Seven SAM sites have been identified within SA-2 missile range 25
(17.5 NM) of the target, and 11 additional SAM sites have been identified 26
18-30 NM distant. 27
 - b. Identified AAA activity in the Thai Nguyen area includes 10 active 28
AAA sites, consisting of 75 occupied 57mm/85mm revetments, 6 dummy 29
100mm revetments and 16 dummy 57mm/85mm revetments. In addition, 30
there are 7 inactive sites in the area. (DOI: 17 August 1965 - 5 May 1966) 31
 - c. Intense HMG and small arms fire is anticipated from local militia 32
and security forces, as well as units of the 312th Infantry Division. 33
10. DAMAGE OBJECTIVE: Destruction of stored materials. Damage 34
criterion is structural damage to storage buildings with accompanying damage 35
to stored materials. Damage level is 30 per cent. 36

11. EFFECT ON NVN: Destruction of this target would result in the loss of a large quantity of military supplies, reduce the NVN capability to supply military units in the north central part of the country and have a deleterious effect upon the overall NVN capability to provide support to the insurgent forces.

12. RECUPERABILITY: Thirty per cent destruction or damage would seriously curtail supply to all troops north of Ha Noi, and in particular, to Military Region Headquarters Viet Bac. The depot would probably be non-operational for 24 hours and then would become 60% operational. Extensive repairs would probably require at least 3 to 5 weeks, dependent upon availability of labor forces. Replacement of destroyed supplies would be dependent upon type and source of materials stored here.

13. COLLATERAL DAMAGE:

a. Insignificant

b. Population				Casualties*			
Target Area		Adjacent Area		Target Area		Adjacent Area	
Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ
300	0	0	350	18	0	0	4

*Casualties estimated under daylight alert conditions.

14. RECOMMENDED WEAPONS AND SORTIES:

This installation is comprised of four areas. One area has been delineated for weapons application. Weapons and sorties have been computed for this area. To show the effort required to achieve the prescribed damage level, total weapons/sorties required over the target are also shown:

(1) In order to achieve a damage level of 30%, weapons/sorties required over target:

WEAPON	500# BOMB or	750# BOMB or	1000# BOMB or	2000# BOMB
(750x1500)	137/16	66/11	55/19	21/21

(2) Weapons/sorties operationally required to achieve "over target" requirement shown above:

167/19	80/14	67/23	26/26
--------	-------	-------	-------

(3) In order to achieve a damage level of 70%, weapons/sorties required over target:

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WEAPON	500# BOMB	or	750# BOMB	or	1000# BOMB	or	2000# BOMB
	462/52		222/37		185/62		71/71

(4) Weapons/sorties operationally required to achieve "over target" requirement shown above:

563/63	271/46	226/76	87/87
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15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%

~~TOP SECRET~~

A-C-BO-4
(Revised by 9th Note to Holders)

Tab BO to
Annex C to
Appendix A

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SA [unclear] [unclear] [unclear]

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A-100-1

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 61 1
2. BE NUMBER: 616-0137 2
3. IDENTIFICATION: Xom Chang Army Barracks South 3
4. DATE OF INFORMATION: 14 July 1966 4
DATE OF TIS: 20 June 1966 5
5. LOCATION: 20-47-01N/105-20-20E, UTM WH 354982, 6
approximately 2 NM south of Hoa Binh. 7
6. DESCRIPTION: This installation comprises 2 main areas, 8
a barracks and administration area on the north side of Route 9
6, and a storage compound on the south side. The barracks 10
contains approximately 25 buildings and has a capacity of 11
550 troops. The storage area contains approximately 9 12
buildings. Adjacent to the storage compound is a motor 13
pool containing 6 structures. 14
7. SIGNIFICANCE: This site is approximately 15 NM west of 15
the Xuan Mai complex, location of the 338th Inf Bde and an 16
infiltrator training center; however, this installation is 17
probably associated with transportation of supplies and 18
possibly infiltrators on both Routes 6 and 12. 19
8. TARGET ENVIRONMENT: This installation is bounded on the 20
north by a wooded area and on the other three sides by farm 21
land and civilian settlements. The junction of Routes 6 and 22
12 is approximately 200 yards east of the target area. 23
9. DEFENSE ENVIRONMENT: 24
- a. Four SAM sites have been identified within SA-2 25
missile range (17.5 NM) of this target and 14 additional 26
SAM sites have been identified 18-30 NM distant. 27
- b. No AAA defense activity has been identified in the 28
area of this target. 29
- c. Sparse HMG and small arms fire is anticipated from 30
dispersed military personnel and local militia. 31
10. DAMAGE OBJECTIVE: Personnel casualties. Damage cri- 32
terion is structural damage to barracks and storage facilities 33
with accompanying casualties. Damage level is 30 percent. 34
11. EFFECT ON NVN: Damage to this facility would have 35
minimal effect on the NVN and would only temporarily curtail 36
the flow of supplies and infiltrators on Routes 6 and 12. 37
12. RECUPERABILITY: The barracks area would probably be 38
operational within 36 hours since ample space is available 39
for field billeting. Replacement of supplies would require 40
2 to 3 days, less if high priorities were assigned. 41
13. COLLATERAL DAMAGE: Insignificant. 42

~~TOP SECRET~~

A-C-BP-2

Tab BP to
Annex C to
Appendix A

(Revised by 9th Note to Holders)

~~TOP SECRET~~

14. RECOMMENDED WEAPONS AND SORTIES:

a. This is a large target complex comprised of two areas. Weapons and sorties have been computed for each area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target is also shown.

(1) In order to achieve a damage level of 30% weapons/sorties required over target.

Weapon:	250# <u>SNAKEYE</u>	or	250# <u>BOMB</u>	or	500# <u>BOMB</u>	or	750# <u>BOMB</u>	
Area A	39/4		60/5		31/4		18/3	9
Area B	17/2		41/4		21/2		13/2	10
TOTALS:	56/6		101/9		52/6		31/5	11

(2) Weapons/sorties operationally required to achieve "over target" requirements shown above:

68/8 123/11 63/8 38/7 14

(3) In order to achieve a damage level of 70% weapons/sorties required over target:

Weapon:	250# <u>SNAKEYE</u>	or	250# <u>BOMB</u>	or	500# <u>BOMB</u>	or	750# <u>BOMB</u>	
Area A	132/11		202/17		105/12		61/10	17
Area B	56/5		138/12		71/8		44/7	18
TOTALS:	188/16		340/29		176/20		105/17	19

(4) Weapons/sorties operationally required to achieve "over target" requirement shown above:

230/19 418/35 216/24 128/21 22

15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50% 23

~~TOP SECRET~~

A-C BP-3

Tab BP to
Annex C to
Appendix A

1947 RV-2

618

.. .. .



100-10244
REF ID: A6-00259
DATE OF PHOTO: JUNE 1968
SCALE: 01/10
DATE OF INTERVIEW: REVIEW IN MARCH 1969
PHOTO REFERENCE: R5157, 0371

A-144-

Tab BQ to Annex C
to Appendix A

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TARGET INFORMATION AND STRIKE

1. TARGET NUMBER: 62 1
2. BE NUMBER: 616-0259 2
3. IDENTIFICATION: Van Dien Army Supply Depot 3
4. DATE OF INFORMATION: 6 March 1969 4
DATE OF TISD: 3 June 1969 5
DATE OF PHOTOGRAPHY: 6 July 1966 6
DATE OF INTELLIGENCE REVIEW: 6 March 1969 7
5. LOCATION: 20-55-50N 105-51-00E, 0.8 NM S of Van Dien, 4.5 NM S of Ha Noi. 8
9
6. DESCRIPTION: The supply depot is served by Route 1A and the N/S rail line and comprises 7 separate areas. There are 155 buildings consisting of 74 barracks, 35 storage/support buildings, 39 support buildings, 21 storage buildings, 19 warehouses, 5 administration-type buildings, and 2 mess halls. The barracks have an estimated capacity of 7,000 troops. 10
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12
13
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7. SIGNIFICANCE: This depot is part of the Ha Noi military supply complex serving defense forces in the area. 15
16
8. TARGET ENVIRONMENT: The depot is located in the flat intensively cultivated area S of Ha Noi. Numerous probable civilian housing and storage areas are located on three sides of the target area. 17
18
19
9. DEFENSE ENVIRONMENT: 20
 - a. The target is within the SAM envelope. 21
 - b. AAA activity has been identified within 3 NM of the target. 22
 - c. HMG and small arms fire is anticipated. 23
10. DAMAGE OBJECTIVE: Destruction of stored materials. Damage criterion is structural damage to storage buildings with accompanying damage to contents. Damage level is 30%. 24
25
26
11. EFFECT ON NVN: Destruction of this facility would have minimal effect since there are a number of supply facilities in the Ha Noi complex. Support to National Defense Headquarters and military units in the area would be reduced only temporarily. 27
28
29
30
12. RECUPERABILITY: The barracks portion of this depot could resume operations within 12 hours since adjacent areas afford sufficient space for field billeting. Depot operations could probably resume functioning within 24 to 36 hours, using locally available labor for emergency repairs and clearing debris. Replacement of destroyed supplies is dependent upon replenishment priorities. If available in North Vietnam, supplies could be replaced within 3 days; if from Communist China, up to 5 days would be required. 31
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~~SECRET~~ NO FOREIGN DISSEM EXCLUDED FROM AUTOMATIC DOWNGRADING

A-C-BQ-2

(Revised by 17th Note to Holders)

Tab BQ to
Annex C to
Appendix A

620

~~SECRET~~

13. COLLATERAL DAMAGE:

a. Insignificant

b. Population

Casualties*

Target Area		Adjacent Area		Target Area		Adjacent Area	
Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ
300	0	150	300	18	0	2	3

*Casualties estimated under daylight alert conditions.

14. RECOMMENDED WEAPONS AND SORTIES:

This target is comprised of 7 areas. Four of the areas with 5 sub areas have been delineated for weapons application. Weapons and sorties have been computed for each area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target are also shown:

(1) In order to achieve a damage level of 30%, weapons/sorties required over target:

WEAPONS	250# SNAKEYE	or	500# SNAKEYE	or	500# BOMB	or	750# BOMB
Area A (545' x 490')	80/7		38/4		50/6		22/4
Area C-1 (730' x 255')	56/5		27/3		46/5		20/3
Area C-2 (710' x 425')	86/7		41/5		56/6		24/4
Area D (415' x 200')	18/2		10/1		20/2		11/2
Area F (1170' x 400')	71/6		39/4		54/6		29/5
TOTALS:	311/27		155/17		226/25		106/18

(2) Weapons/sorties operationally required to achieve "over target" requirements shown above:

373/32	186/20	271/30	127/22
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(3) In order to achieve a damage level of 70%, weapons/sorties required over target:

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A-C-BQ-3

(Revised by 17th Note to Holders)

Tab BQ to
Annex C to
Appendix A

~~SECRET~~

WEAPONS:	250# <u>SNAKEYE</u>	or	500# <u>SNAKEYE</u>	or	500# <u>BOMB</u>	or	750# <u>BOMB</u>	
Area A	269/22		127/14		169/19		72/12	1
Area C-1	189/16		89/10		155/17		67/11	2
Area C-2	289/24		136/15		188/21		81/14	3
Area D	59/5		32/4		67/7		35/6	4
Area F	238/20		130/14		182/20		96/16	5
TOTALS:	1044/87		514/57		761/84		351/59	6
(4) Weapons/sorties operationally required to achieve "over target" requirements shown above:								7
	1253/104		617/68		913/101		421/71	8

15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%

~~SECRET~~

A-C-BQ-4
(Revised by 17th Note to Holders)

Tab BQ to
Annex C to
Appendix A

APPENDIX A TO THE 7-7 AIRCRAFT A

1964

NORTH VIETNAM

SECRET

A-6-2-1

For use in Appendix A
to Appendix A

TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 63 1
2. BE NUMBER: 616-0105 2
3. IDENTIFICATION: Thuan Chau Barracks and Depot 3
4. DATE OF INFORMATION: 4 January 1965 DATE OF TIS: 4
20 December 1965 5
5. LOCATION: 21-26-17N 103-41-39E, UTM UJ 646707, along 6
Route 6 approximately 14 NM NW of Son La and 18 NM SE of 7
Tuan Giao. 8
6. DESCRIPTION: Target consists of 7 groupings of barracks 9
areas and storage/support-type buildings scattered along Route 10
6 for about 2600 yds. Included are approximately 105 storage/ 11
support type buildings, 45 barracks-type buildings and 12 12
administration buildings. There are vehicle maintenance 13
shops and associated motor pools throughout the area. 14
Interspersed are several groupings of civilian-type huts. 15
7. SIGNIFICANCE: The Thuan Chau Military School for 16
training MR Northwest recruits and militia is reportedly 17
located here. This area may also be a storage base and 18
headquarters for work camps active on roads and bridge 19
construction to the north and west. 20
8. TARGET ENVIRONMENT: Target is located in the mountainous 21
area southwest of the Black River. Ridges and hilltops are 22
wooded with extensive cultivation in valleys, particularly 23
immediately adjacent to larger water courses. Majority of 24
the target area is located on south-facing lower slopes over- 25
looking and bordered by Route 6. Area north and northeast of 26
the target area is mixed with wooded areas and cultivated 27
fields. Area to the south and southwest is heavily cultivated 28
along the river which flows parallel to and south of the road. 29
Two civilian settlements, one identified as workers' huts, 30
have been identified adjacent to the southwestern edge of the 31
complex. No identified military units are known to be associ- 32
ated with the target area. 33
9. DEFENSE ENVIRONMENT: No AAA defenses have been 34
identified in connection with this complex. At Son La, 14 NM 35
SE are 3 light (14.5mm-37mm) AAA containing 14 positions, 12 36
of them occupied. At Nam San, 24 NM SE is another occupied 37
light 4-position site and 3 unoccupied sites of 12 positions 38
and a possible unoccupied medium site of 8 positions. There 39
are EW radars at Son La and Dien Bien Phu and the target is also 40
in range of the GCI at Ban Xom Lom. 41
10. DAMAGE OBJECTIVE: Destruction of stored materials. 42
Damage criterion is structural damage to storage buildings. 43
This will be accompanied by damage to contents. Damage level 44
is 30%. 45
11. EFFECT ON DRV: Will limit support to PL and to the 316th 46
Inf Brigade in proportion to the criticality of stored 47
supplies. 48

~~TOP SECRET~~

12. RECUPERABILITY: Limited operations could probably be resumed within 12-24 hours after infliction of damage. Sufficient additional buildings are available elsewhere in this complex to supply cover for critical items. Replacement of supplies lost would be dependent on priorities of material and transportation, but could probably be accomplished in from 3-5 days.

13. COLLATERAL DAMAGE: Insignificant.

14. RECOMMENDED WEAPONS AND SORTIES:

a. This is a large target complex comprised of seven areas. Weapons and sorties have been computed for each area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target is also shown.

(1) In order to achieve a damage level of 30% weapons/sorties required over target:

Weapon	250# <u>SNAKEYE</u>	or	250# <u>BOMB</u>	or	500# <u>BOMB</u>	or	750# <u>BOMB</u>
Area A	55/5		90/8		46/5		27/5
Area B	24/2		49/4		25/3		15/3
Area C	143/12		166/14		85/9		50/8
Area D	199/17		244/20		125/14		74/12
Area E	113/9		146/12		75/8		44/7
Area F	59/5		89/7		46/5		27/5
Area G	91/8		113/9		58/6		34/6
Totals	684/57		897/75		460/51		271/45

(2) Weapons/sorties operationally required to achieve "over target" requirement shown above:

834/70	1094/91	561/62	330/55
--------	---------	--------	--------

(3) In order to achieve a damage level of 70% weapons/sorties required over target:

Weapon	250# <u>SNAKEYE</u>	or	250# <u>BOMB</u>	, or	500# <u>BOMB</u>	or	750# <u>BOMB</u>
Area A	185/15		303/25		155/17		92/15
Area B	81/7		165/14		85/9		51/9
Area C	483/40		561/47		287/32		169/28
Area D	673/56		825/69		423/47		250/42
Area E	331/32		493/41		253/28		149/25
Area F	199/17		300/25		155/17		92/15
Area G	307/26		382/32		196/22		115/19
Totals	2309/192		3029/252		1554/173		918/153

~~TOP SECRET~~

A-C-BR-3

Tab BR to
Annex C to
Appendix A

~~TOP SECRET~~

(4) Weapons/sorties operationally required to achieve "over target" requirement shown above: 1
2

2816/234 3695/307 1895/211 1120/187 3

15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50% 4

~~TOP SECRET~~

A-C BR 4

Tab BR to
Annex C to
Appendix A

TAB BRa TO ANNEX C TO APPENDIX A

TARGET NO. 63.1



~~TOP SECRET~~

A-C-BRa-1

Tab BRa to
Annex C to
Appendix A

~~TOP SECRET~~

TARGET INFORMATION SHEET AND STRIKE DATA

1. TARGET NUMBER: 63.1 1
2. B.E. NUMBER: 617-1174 2
3. IDENTIFICATION: Vinh Loc Storage Area S 3
4. DATE OF INFORMATION: 24 May 1965 DATE OF TIS: 13 July 1965 4
5
5. LOCATION: 19-17-37N 105-43-36E, UTM WQ 763334. 17 NM 6
E of the Phu Qui storage and barracks complex on the RR and 7
main highway between Thanh Hoa and Vinh. It is 32 NM S of 8
Thanh Hoa and 42 NM N of Vinh. Cap Bouton lies 4 NM SE. 9
6. DESCRIPTION: This appears to be a military warehouse area 10
containing about 50,000 square feet of storage space. It con- 11
sists of 26 warehouse type buildings, 4 support-type buildings 12
and 2 security buildings. Area is enclosed by security fencing 13
and has access to railroad siding. There is evidence of trench- 14
ing and possible strong points and it appears to be supported 15
by a quarters-type building area which also contains some 16
trenching. 17
7. SIGNIFICANCE: This may be a shipping point for supplies 18
related to the Phu Qui area or it may be a shipping point for 19
rice from the surrounding cultivated fields which do not appear 20
related to other villages. It must be noted that this location 21
is less than 3 NM NW from the Yen Phu area which has been 22
claimed by the NVN to be a leprosarium. 23
8. TARGET ENVIRONMENT: This depot lies alongside the Thanh 24
Hoa-Vinh Railroad and is surrounded by cultivated rice fields 25
interspersed with civilian houses. Low wooded hills lie beyond 26
the cultivated area to the west of the target. 27
9. DEFENSE ENVIRONMENT: No known AAA defenses are known to 28
be in the vicinity of this target. The closest military units 29
are located 20 NM to the south in the Phu Qui area. No known 30
radar is located in this area; however this site falls within 31
the EW capabilities of radar at Cap Falaize and Hon Me Island. 32
10. DAMAGE OBJECTIVE: Destruction of stored materials. 33
Damage criterion is structural damage to storage buildings 34
and accompanying destruction of stored supplies. Damage level 35
is 30%. 36
11. EFFECT ON NVN: Support for military elements both to 37
the north and south of the Vinh Loc area would be temporarily 38
disrupted. It is also probable that supplies for Viet Cong 39
activity would be curtailed for the period required to re- 40
establish this storage area. 41
12. RECUPERABILITY: A thirty percent damage level would 42
necessitate use of some emergency storage, possibly in the 43
civilian areas nearby. Limited operations could be resumed 44
within 48 hours. Replacement of stocks from sources to the 45
north would require 3 to 5 days. If this storage site is used 46
for locally grown rice, replacement to the pre-strike level 47
may depend on the next harvest. 48
13. COLLATERAL DAMAGE: Insignificant. 49

~~TOP SECRET~~

A-C-BRa-2

Tab BRa to
Annex C to
Appendix A

(Revised by 7th Note to Holders)

628

~~TOP SECRET~~

14. RECOMMENDED WEAPONS AND SORTIES:

a. In order to achieve a damage level of 30%, weapons/
sorties required over target:

Weapon:	250# <u>SNAKEYE</u>	250# <u>BOMB</u>	500# <u>BOMB</u>	750# <u>BOMB</u>
	53/4	75/6	39/4	39/4

b. Weapons/sorties operationally required to achieve
"over target" requirements shown above:

65/5	91/7	48/5	48/5
------	------	------	------

c. In order to achieve a damage level of 70%, weapons/
sorties required over target:

Weapon:	250# <u>SNAKEYE</u>	250# <u>BOMB</u>	500# <u>BOMB</u>	750# <u>BOMB</u>
	179/15	253/21	132/15	78/13

d. Weapons/sorties operationally required to achieve
"over target" requirements shown above:

218/18	309/26	161/18	95/16
--------	--------	--------	-------

15. PROBABILITY OF ACHIEVING DAMAGE LEVEL: 50%

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A-C-BRa-3

Tab BRa to
Annex C to
Appendix A

(Revised by 7th Note to Holders)

629



JCS 63.11
BE: 0616 00696
DATE OF PHOTO: JULY 1966
SCALE: APPROXIMATELY 1:2,000
DATE OF INTELLIGENCE REVIEW: 3 MARCH 1967
PHOTO REFERENCE: AS 5157 371

Tab BRL to Annex C
to Appendix A

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 63.11 1
2. BE NUMBER: 616-0696 2
3. IDENTIFICATION: Van Dien Vehicle Depot Complex 3
4. DATE OF INFORMATION: 8 October 1968 4
DATE OF TISD: 2 June 1969 5
DATE OF PHOTOGRAPHY: 6 July 1966 6
DATE OF INTELLIGENCE REVIEW: 3 March 1969 7
5. LOCATION: 20-57-07N 105-50-58E, located 0.2 NM N of Van Dien,
5 NM S of Ha Noi on Route 1A and the North/South rail line. 8
9
6. DESCRIPTION: This complex is comprised of 7 separate areas
with an aggregate of 145 buildings. Route 1A and the N/S rail line
bisect this installation with areas A,B,E, & F to the west and
areas C,D & G to the east. 10
11
12
13
7. SIGNIFICANCE: This depot is in an area of light industry S
of Ha Noi. The presence of many trucks indicates that this is
probably a maintenance and repair area. The areas are secured,
the maintenance/storage buildings are large and there is ample parking
and the roads are hard-surface with gentle turns into the buildings. 14
15
16
17
18
8. TARGET ENVIRONMENT: The areas making up this facility are
interspersed by cultivated fields and civilian settlements. Numerous
industrial and storage areas are located both N and S of the target
along Route 1A. 19
20
21
22
9. DEFENSE ENVIRONMENT: 23
 - a. The target is within the SAM envelope. 24
 - b. AAA activity has been identified within 3 NM of the target. 25
 - c. HMG and small arms fire is anticipated. 26
10. DAMAGE OBJECTIVE: Destruction of vehicle maintenance
facilities. Damage criterion is structural damage to maintenance
structures and barracks with accompanying damage to equipment,
vehicles and personnel casualties. Damage level is 30%. 27
28
29
30
11. EFFECT ON NVN: Damage to this facility would further aggravate
the apparent transportation slow-down caused by repeated strikes
on vehicles, bridges, roads, and railroads. 31
32
33
12. RECUPERABILITY: Limited vehicle maintenance and repair could
probably be resumed within 36 hours, or as soon as debris is cleared.
Housing for displaced personnel could be provided within 12 hours
since dispersal to nearby civilian housing is feasible. 34
35
36
37

~~SECRET~~ NO FOREIGN DISSEM EXCLUDED FROM AUTOMATIC DOWNGRADING

A-C-BRb-2

(Revised by 17th Note to Holders)

Tab BRb to
Annex C to
Appendix A

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13. COLLATERAL DAMAGE:

a. Insignificant.

Population				Casualties*			
Target Area		Adjacent Area		Target Area		Adjacent Area	
Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ
4600	0	200	700	276	0	2	7

*Casualties estimated under daylight alert conditions.

14. RECOMMENDED WEAPONS AND SORTIES:

This target complex consists of 7 areas. Five areas with 8 sub areas have been delineated for weapons application. Weapons and sorties have been computed for each area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required to achieve "over target" requirements are also shown:

(1) In order to achieve a damage level of 30%, weapons/sorties required over target:

WEAPON	250 # SNAKEYE	500# SNAKEYE	500# BOMB	750# BOMB
Area A (100' x 255')	35/3	20/2	34/4	18/3
Area B (105' x 35')	17/1	9/1	18/2	10/2
Area C-1 (170' x 45')	61/5	29/3	41/5	18/3
Area C-2 (100' x 400')	40/3	22/2	31/3	17/3
Area D (125' x 515')	53/4	29/3	38/4	20/3
Area G-1 (110' x 385')	70/6	33/4	48/5	21/4
Area G-2 (130' x 110')	14/1	8/1	22/2	12/2
Area G-3 (145' x 330')	28/2	15/2	24/3	13/2
TOTALS	318/25	165/18	256/28	129/22

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A-C-BRb-3

(Revised by 17th Note to Holders)

Tab BRb to
Annex C to
Appendix A

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(2) Weapons/sorties operationally required to achieve
"over target" requirements shown above:

382/30 198/22 307/34 155/26

(3) In order to achieve a damage level of 70%, weapons/
sorties required over target:

WEAPON	250# SNAKEYE	or	500# SNAKEYE	or	500# BOMB	or	750# BOMB
Area A	118/10		65/7		113/13		60/10
Area B	56/5		31/3		59/7		32/5
Area C-1	135/11		74/8		105/12		56/9
Area C-2	204/17		96/11		138/15		59/10
Area D	177/15		97/11		127/14		68/11
Area G-1	235/20		111/12		160/18		68/11
Area G-2	46/4		26/3		72/8		38/6
Area G-3	93/8		51/6		80/9		43/7
TOTALS	1064/90		551/61		854/96		424/69

(4) Weapons/sorties operationally required to achieve
"over target" requirement shown above:

1025/115 509/83 1277/108 661/73

15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%.

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A-C-BRD-4

(Revised by 17th Note to Holders)

Tab BRb to
Annex C to
Appendix A

~~SECRET~~

TOP SECRET - COMINT

SECRET NO. 61

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North Atlantic
Atlantic Ocean

NO. 1000 ON CASE

~~SECRET~~

SECRET NO. 61

SECRET NO. 61

RE: [illegible]
DATE OF PHOTO: [illegible]
SCALE: [illegible]
DATE OF ANALYSIS: [illegible]
PHOTO REF: [illegible]

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~~TOP SECRET~~

TARGET INFORMATION SHEET AND STRIKE DATA

1. TARGET NUMBER: 63.13 1
2. BE NUMBER: 617-1289 2
3. IDENTIFICATION: Chuc A Army Bks and Supply Area. 3
4. DATE OF INFORMATION: 13 August 1965 DATE OF TIS: 14 October 1965 4
5
5. LOCATION: 18-05-55N/105-41-35E, UTM WF 733012, approximately 2.2 NM NW of Chuc A and 6 NM east of the Laotian-VN border. 6
7
6. DESCRIPTION: This supply area extends for about 1.5 NM on both sides of a road leading NW from Chuc A. The facilities consist of approximately 50 buildings including 15 barracks-type structures, 21 storage buildings, 10 support buildings, 3 mess halls and headquarters building. A path leads from the headquarters area to possible cave storage. The roads at this site appear well used and trenching is evident throughout the area. Troop capacity is approximately 1250 and storage capacity is about 57,000 square feet. 9
10
11
12
13
14
15
16
17
7. SIGNIFICANCE: This site is close to both Route 12 and Laotian border; therefore, it is ideally situated to provide supplies and support for infiltrations activities. 18
19
20
8. TARGET ENVIRONMENT: Target is located in a small cultivated valley surrounded by heavily wooded hills. Several small farms are also located in the valley, some of which abut the target area. 21
22
23
24
9. DEFENSE ENVIRONMENT: No known SAM or AAA defenses are located in the vicinity of the target. Light AW and small arms fire may be encountered. There are no known threat (Fire Control) radars in the area. 25
26
27
28
10. DAMAGE OBJECTIVE: Destruction of stored materials. Damage criterion is structural damage to storage buildings and accompanying damage to stored supplies. Damage level is 30%. 29
30
31
32
11. EFFECT ON DRV: Damage to this supply area would temporarily slow down infiltration activities in this area. 33
34
12. RECUPERABILITY: Supply operations could probably be resumed within 36 hours after damage utilizing military personnel for clearing debris and effecting emergency repairs. However, it is probable that both supplies and military personnel would be dispersed to the civilian settlement or to the wooded areas which surround the installation on 3 sides. 35
36
37
38
39
40
13. COLLATERAL DAMAGE: Insignificant. 41
14. RECOMMENDED WEAPONS AND SORTIES: 42
 - a. This target complex is comprised of four areas. Weapons and sorties have been computed for each area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target area are also shown: 43
44
45
46
47

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A-C-Brd-2

Tab Brd to
Annex C to
Appendix A

(Added - 5 January 1966)

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1947 RV-2

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(1) In order to achieve a damage level of 30%,
weapons/sorties required over target:

WEAPON	<u>250#</u> <u>SNAKEYE</u>	or	<u>250#</u> <u>BOMB</u>	or	<u>500#</u> <u>BOMB</u>	or	<u>750#</u> <u>BOMB</u>	
Area A	83/7		131/11		67/7		40/7	
Area B	36/3		70/6		36/4		21/4	
Area C	41/3		82/7		42/5		25/4	
Area D	134/11		165/14		85/9		50/8	
Totals	294/24		448/38		230/25		136/23	

(2) Weapons/sorties operationally required to achieve
"over target" requirement shown above:

359/30	546/46	280/31	166/28
--------	--------	--------	--------

(3) In order to achieve a damage level of 70%,
weapons/sorties required over target:

WEAPON	<u>250#</u> <u>SNAKEYE</u>	or	<u>250#</u> <u>BOMB</u>	or	<u>500#</u> <u>BOMB</u>	or	<u>750#</u> <u>BOMB</u>	
Area A	280/23		442/37		226/25		135/23	
Area B	121/10		236/20		121/13		71/12	
Area C	138/12		276/23		142/16		85/14	
Area D	452/38		557/46		287/32		169/28	
Totals	991/83		1511/126		776/86		460/77	

(4) Weapons/sorties operationally required to achieve
"over target" requirement shown above:

1209/101	1843/154	946/105	561/94
----------	----------	---------	--------

15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%

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A-C-BRD-3

Tab BRD to
Annex C to
Appendix A

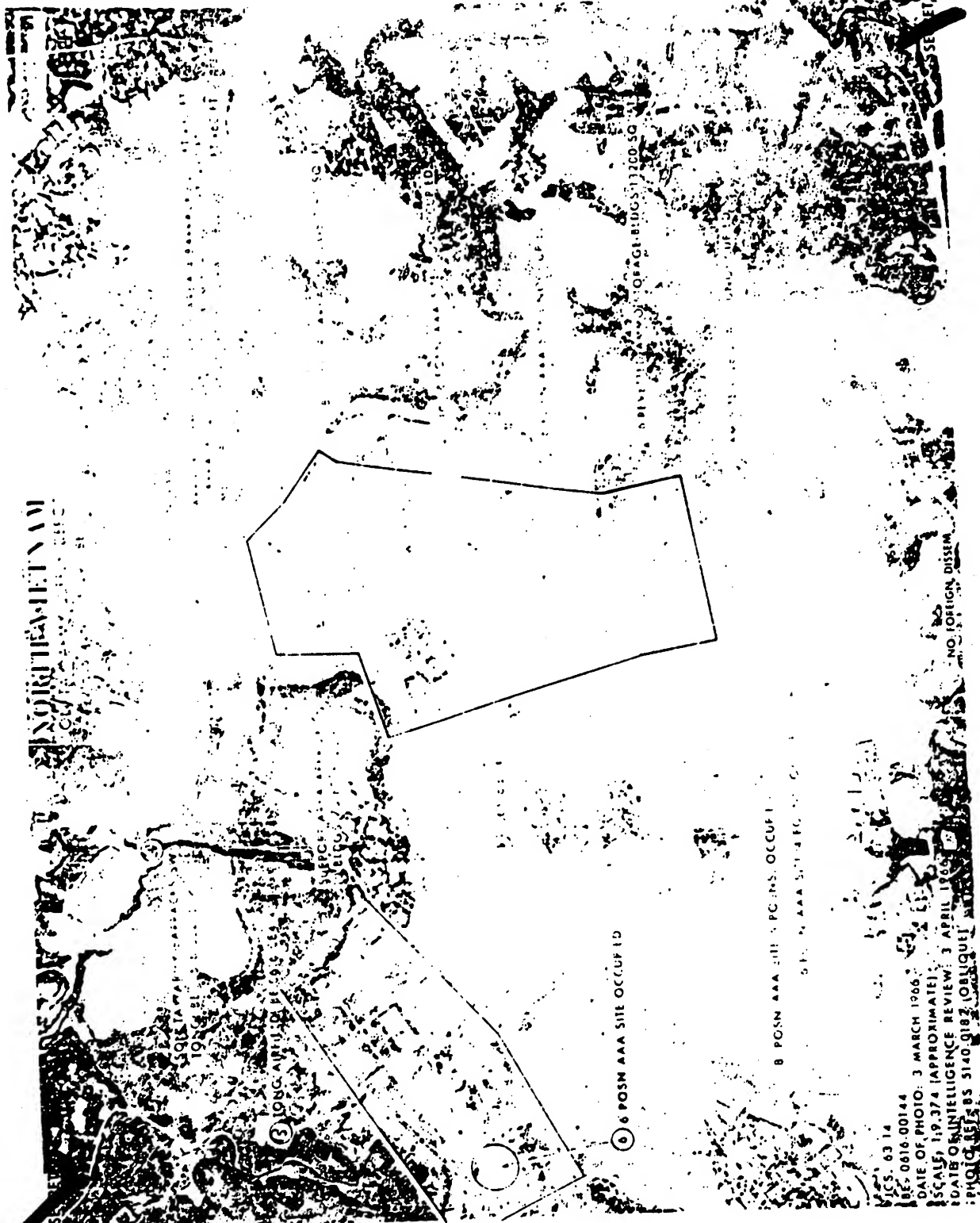
(Revised by 7th Note to Holders)

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TAB BRG TO ANNEX C TO APPENDIX A

TARGET NO. 63.14



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(Revised by 10th N/H)

A-C-BRc-1

1. $\Delta_{\text{H}_2\text{O}}^{\text{H}_2\text{O}}$ = 0
 2. $\Delta_{\text{H}_2\text{O}}^{\text{H}_2\text{O}}$ = 0

637

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 63.14 1
2. BE NUMBER: 616-0144 2
3. IDENTIFICATION: Son Tay Army Supply Depot 3
4. DATE OF INFORMATION: 12 August 1966 4
DATE TIS: 19 August 1966 5
DATE OF PHOTOGRAPHY: 3 March 1966 6
DATE OF INTELLIGENCE REVIEW: 3 April 1966 7
5. LOCATION: 21-06-42N 105-29-08E, UTM WJ 507333, 1.5 NM 8
E of Tong Airfield, approximately 2.5 NM SW of Son Tay, approximate- 9
ly 20 NM WNW of Ha Noi. 10
6. DESCRIPTION: This active supply installation contains ap- 11
proximately 6 storage buildings, 7 barracks (4 multi-story), 1 12
administration building, 2 vehicle sheds, a possible ordnance shop, 13
6 reverted probable ammunition storage buildings and 19 miscel- 14
laneous buildings. The storage capacity is estimated to be ap- 15
proximately 55,500 sq. ft. plus a probable ammunition storage of 16
1,400 metric tons. Troop capacity is around 1,700. 17
7. SIGNIFICANCE: This depot is a part of the Son Tay Military 18
Complex. Two artillery regiments and several schools, including 19
armored and signals officers training, are reportedly in the Son 20
Tay area. 21
8. TARGET ENVIRONMENT: This site is located in a relatively 22
flat and heavily cultivated area. Civilian settlements are near- 23
by and Tong Airfield is located just to the west of the depot. 24
9. DEFENSE ENVIRONMENT: 25
 - a. Fourteen SAM sites, one of which is immediately south 26
of the ammo storage area, have been identified within SA-2 missile 27
range (17.5 NM) and 10 additional sites are located 18-30 NM from 28
the target. 29
 - b. Identified AAA defense activity in the Son Tay area in- 30
cludes 6 active sites (17 occupied 37mm and 21 occupied 57mm/85mm 31
revetments) and 5 inactive AAA sites. (DOI: 13 May 1965 - 6 July 32
66). 33
 - c. Intense HMG and small arms fire from the barracks and 34
training areas is anticipated. 35

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A-C-BRe-2

Tab BRe to
Annex C to
Appendix A

(Revised by 10th Note to Holders)

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10. DAMAGE OBJECTIVE: Destruction of stored materials. Damage criterion is structural damage to storage buildings and accompanying personnel casualties. Damage level is 30 percent. 1
2
3

11. EFFECT ON NVN: Damage to this installation would temporarily disrupt supply to nearby barracks and schools thereby interrupting training activities for a short time. The overall NVN defensive position would not be seriously affected. 4
5
6
7

12. RECUPERABILITY: Limited operations could be resumed within 36 hours since there is ample space for field billeting and temporary shelter for salvaged materials. Replacement of supplies and personnel would require less than a week since the Sor. Tav complex contains other military elements, and Ha Noi, the probable source of supplies, is relatively close. 8
9
10
11
12
13

13. COLLATERAL DAMAGE: 14

a. Insignificant. 15

b. Population

Casualties*

Population				Casualties*			
Target Area		Adjacent Area		Target Area		Adjacent Area	
Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ
1600	0	100	50	96	0	1	1

 16
17
18
19

*Casualties estimated under daylight alert conditions. 20

14. RECOMMENDED WEAPONS AND SORTIES: 21

This target complex is comprised of four areas. Weapons and sorties have been computed for each area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target are also shown: 22
23
24
25

(1) In order to achieve a damage level of 30%, weapons/sorties required over target: 26
27

WEAPON	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	750# BOMB	
Area A (500x1100)	135/11		176/15		176/20		176/29	28
Area B (150x450)	21/2		50/4		26/3		15/3	29
Area C (750x850)	133/11		158/13		81/9		48/8	30
Area D (150x600)	26/2		60/5		31/3		18/3	31
Totals	315/26		444/37		314/35		257/43	32

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A-C-BRe-3

Tab BRe to
Annex C to
Appendix A

(Revised by 10th Note to Holders)

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(2) Weapons/sorties operationally required to achieve
"over target" requirements shown above: 1
2

384/32 541/46 383/43 313/53 3

(3) In order to achieve a damage level of 70%, weapons/
sorties required over target: 4
5

WEAPON	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	750# BOMB	
Area A	455/38		594/50		594/66		594/99	6
Area B	71/6		169/14		88/10		51/9	7
Area C	449/38		533/44		273/30		162/27	8
Area D	88/7		203/17		105/12		61/10	9
Totals	1063/89		1499/125		1060/118		868/145	10

(4) Weapons/sorties operationally required to achieve
"over target" requirements shown above: 11
12

1296/108 1828/153 1293/144 1059/177 13

15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50% 14

~~TOP SECRET~~

A-C-BRe-4

Tab BRe to
Annex C to
Appendix A

(Revised by 10th Note to Holders)

640

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MAP OF THE AREA OF THE ARABIAN DESERT

MAP NO. 100



~~TOP SECRET~~

A-C-PT-1

~~TOP SECRET~~

TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 63.2 1
2. BE NUMBER: 0617-00091 2
3. IDENTIFICATION: Dong Thanh Warehouse Area South 3
4. DATE OF INFORMATION: 5 January 1965 4
DATE OF TIS: 5 July 1966 5
5. LOCATION: 17-28-59N/106-30-50E, UTM XE 610310 6
(1.3 NM SSW of Dong Thanh and 6 NM West of Dong Hoi). 7
6. DESCRIPTION: This warehouse area is oriented N-S along 8
the east bank of the Song Dinh and contains 5 warehouse 9
areas and a barracks area. Area A contains 35 buildings 10
including 7 warehouses and 28 support buildings; area B 11
contains 10 warehouses and 6 support buildings; area C: 12
13 warehouses and 6 support buildings; area D: 7 warehouses 13
and 5 support buildings; area E: 4 warehouses. Area F con- 14
tains 14 barracks-type buildings and an administration 15
building. Capacity is about 1200 men. Total storage space 16
is 160,000 square feet.
7. SIGNIFICANCE: This depot is probably the supply 17
center for the 325th Division and supporting troops in the 18
Dong Hoi area. It probably receives all classes of supply 19
direct from Vinh. 20
8. TARGET ENVIRONMENT: This depot is located in fairly 21
flat terrain with low wooded hills to the south and paddy 22
fields to the north and east. Small villages surround the 23
area and other military installations and training areas are 24
to the east. 25
9. DEFENSE ENVIRONMENT: 26
 - a. Nine active AAA sites with 34 light (14.5mm - 37mm) 27
AAA positions occupied and 7 positions unoccupied are 28
located within 6 NM of the target in the Dong Hoi area, 29
located near troop areas. 30
 - b. Early warning radars are: one KNIFEREST B and one 31
SCR located at 17-30N/106-36E. 32
10. DAMAGE OBJECTIVE: Damage criterion is structural 33
damage to buildings and accompanying personnel casualties. 34
Damage level is 30 percent. 35
11. EFFECT ON DRV: Could have immediate effect on logistic 36
to support troops in Dong Hoi area and to DRV elements 37
supporting Viet Cong. 38
12. RECUPERABILITY: With 30% destruction assumed piece- 39
meal operations could begin in 24-48 hours. 5-10 days 40
would be required to effect repairs and receive full quota 41
of supplies to resume normal operations. 42

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A-C-BT-2

Tab BT to
Annex C to
Appendix A

(Revised by 9th Note to Holders)

~~TOP SECRET~~

13. COLLATERAL DAMAGE:

a. Insignificant

b. Population

Casualties*

Target Area		Adjacent Area		Target Area		Adjacent Area	
Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ
240	0	80	0	14	0	1	0

* Casualties estimated under daylight alert conditions.

14. RECOMMENDED WEAPONS AND SORTIES:

a. This is a large target complex comprised of six areas. Weapons and sorties have been computed for each area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target is also shown.

(1) In order to achieve a damage level of 30% weapons/sorties required over target:

Weapon:	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	750# BOMB
Area A	91/8		117/10		59/7		34/6
Area B	78/7		123/10		62/7		36/6
Area C	67/6		94/8		47/5		22/8
Area D	51/4		77/6		39/4		23/4
Area E	24/2		57/5		29/3		17/3
Area F	82/7		116/10		58/7		34/6
TOTALS:	393/34		584/49		294/33		172/30

(2) Weapons/sorties operationally required to achieve "over target" requirement shown above:

475/41 710/60 358/40 210/36

(3) In order to achieve a damage level of 70% weapons/sorties required over target:

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A-C-BT-3

Tab BT to
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Appendix A

(Revised by 9th Note to Holders)

~~TOP SECRET~~

Weapon:	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	750# BOMB
Area A	307/26		395/33		199/22		115/19
Area B	263/22		415/35		209/23		112/20
Area C	226/19		317/26		159/18		95/16
Area D	172/14		260/22		132/15		78/13
Area E	81/7		192/16		98/11		58/10
Area F	277/23		390/33		196/22		115/19
TOTALS:	1326/111		1969/165		993/111		583/97

(4) Weapons/sorties operationally required to achieve "over target" requirement shown above:

1620/136 2400/181 1220/136 710/118

15. PROBABILITY OF ACHIEVING DAMAGE LEVEL: 50%.

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A-C-BT-4

Tab BT to
Annex C to
Appendix A

(Revised by 9th Note to Holders)



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A-C-B7c-1

Tab B7c to
Annex C to
Appendix A

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 63.21 1
2. B.E. NUMBER: 617-0217 2
3. IDENTIFICATION: Dong Thanh Warehouse Area W 3
4. DATE OF INFORMATION: 2 June 1965 DATE OF TIS: 12 July 1965 4
5
5. LOCATION: 17-30-01N 106-29-45E, UTM XE 588354, 1.3 6
nm SW of Dong Thanh, 7 NM WNW of Dong Hoi. 7
6. DESCRIPTION: This storage facility contains five areas. 8
Areas A and B which are closely associated, contain 22 barracks, 9
21 storage buildings and 6 support structures. There are 2 10
administration buildings, 2 possible mess halls and 4 barracks- 11
type structures in Area C; and in Area D there are 18 fence- 12
secured and 10 unsecured storage buildings and approximately 7 13
support structures. Area E is somewhat removed and to the 14
north of the other areas and contains 5 barracks-type buildings, 15
5 storage and 7 small support structures. Storage capacity of 16
this depot is approximately 54,000 sq. ft. and the barracks 17
space could accommodate up to 1,125 personnel. 18
7. SIGNIFICANCE: This depot is near the general area 19
formerly occupied by the 325th Division and is close to Dong 20
Hoi. Areas A and D show evidence of trenching; however, this 21
installation is predominately agricultural in appearance. 22
The size and extent of the surrounding cultivated areas suggest 23
a government enterprise, possibly a state farm, that is thought 24
to support troops in local area. 25
8. TARGET ENVIRONMENT: Areas A, B, and C are located in 26
wooded hills surrounded by cultivated fields and extensive 27
orchards or groves, while Areas D and E are on flat level 28
ground adjoining cultivated areas. 29
9. DEFENSE ENVIRONMENT: 30
- a. Twenty-six of the Dong Hoi complex AAA defense sites 31
are within 6 NM of this installation; however, only 2 32
sites are active (6 occupied/4 unoccupied 14.5mm/37mm). 33
The inactive sites contain 99 unoccupied 14.5mm/37mm 34
positions and 4 HMG positions. 35
- b. This installation falls within the early warning 36
capability of EW radar at Dong Hoi. 37
10. DAMAGE OBJECTIVE: Destruction of stored materials. 38
Damage criterion is structural damage to storage buildings. 39
Damage level is 30 percent. 40
11. EFFECT ON DRV: Could have an immediate effect on 41
logistic support to troops in the Dong Hoi area and to DRV 42
elements supporting military activities of the Viet Cong. 43
Activities related to operation of the surrounding agricultural 44
complex would also probably suffer disruption resulting in a 45
minor and temporary effect on the civilian economy. 46

~~TOP SECRET~~

A-C-BTa-2

Tab BTa to
Annex C to
Appendix A

~~TOP SECRET~~

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12. RECOMMENDATION: Limited operations could be resumed within 48 hours since there is ample space to set up temporary shelter and storage for salvaged materials. A minimum of 5 days would be required to clear debris and if the stored supplies are acquired from further north, it would take at least 30 days to replace destroyed stocks.

13. COLLATERAL DAMAGE: Insignificant.

14. RECOMMENDED WEAPONS AND SORTIES:

a. This storage target is comprised of 5 areas. Weapons and sorties have been computed for each area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target is also shown.

(1) In order to achieve a damage level of 30%, weapons/sorties required over target:

Weapon	250# <u>SNAKEYE</u>	or	250# <u>BOMB</u>	or	500# <u>BOMB</u>	or	750# <u>BOMB</u>
Area A	307/26		309/31		189/21		111/18
Area B	33/3		55/5		28/3		17/3
Area C	29/2		48/4		25/3		15/2
Area D	198/17		234/19		119/13		71/12
Area E	40/3		70/6		36/4		21/4
Totals	607/51		776/65		397/44		235/39

(2) Weapons/sorties operationally required to achieve "over target" requirement shown above:

740/62	946/79	484/54	287/48
--------	--------	--------	--------

(3) In order to achieve a damage level of 70% weapons/sorties required over target:

Area A	1035/86	1243/103	638/71	374/62
Area B	111/9	185/15	95/11	58/10
Area C	98/8	162/14	85/9	51/8
Area D	668/56	789/66	401/45	240/40
Area E	135/11	236/20	121/13	71/12
Totals	2047/170	2615/218	1340/149	794/132

(4) Weapons/sorties operationally required to achieve "over target" requirement shown above:

2496/208	3189/266	1634/182	968/161
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15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%.

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A-C-BTa-3

Tab ETa to
Annex C to
Appendix A

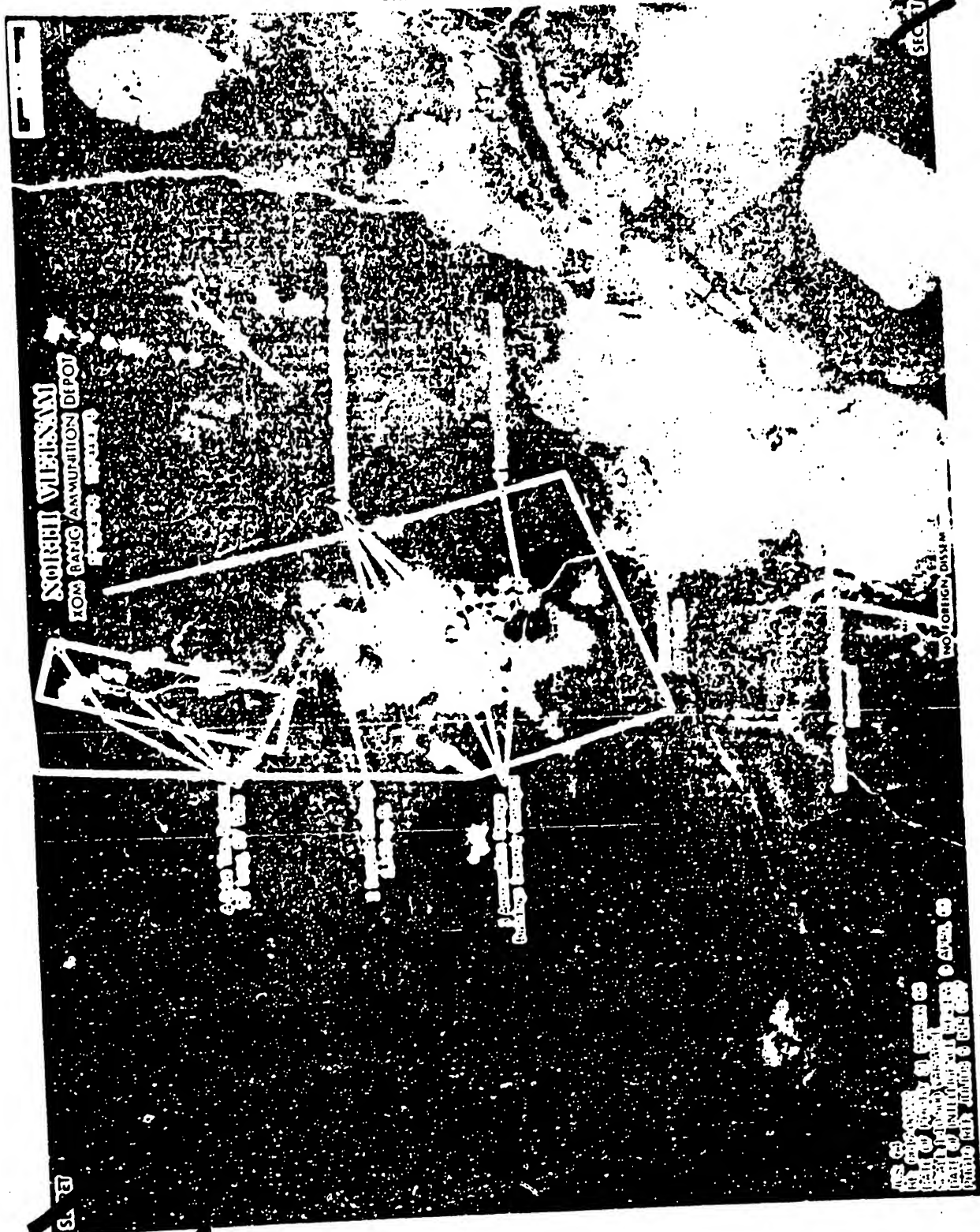
(Revised by 7th Note to Holders)

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TAB BU TO ANNEX C TO APPENDIX A

TARGET NO. 61



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A-C-BU-1

Tab BU to Annex C
to Appendix A

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 64 1
2. BE NUMBER: 0617-00222 2
3. IDENTIFICATION: Xom Bang Ammo Depot 3
4. DATE OF INFORMATION: 9 April 1965 4
DATE OF TIS: 16 April 1965 5
5. LOCATION: 17-06-59N/106-45-10E, UTM 48Q XD 855927, 6
0.5 NM NW of Xom Bang, approximately 7 NM ENE of Vit Thu Lu 7
and approximately 15 NM WNW of Vinh Linh. 8
6. DESCRIPTION: This is an ammo storage complex consisting 9
of 3 adjacent areas covering 35 acres: 10
 - a. A group of 8 ammo storage buildings, 5 set in hill- 11
side cuts and all revetted, and 2 support buildings; 12
 - b. to the east is a barracks and support area containing 13
4 barracks, 1 administration building and 4 support 14
buildings W of the road, and 4 probable storage buildings, 15
4 support buildings and a motor pool on the SE side of the 16
road. Troop capacity is approximately 500; 17
 - c. a more recently constructed area to the west con- 18
sisting of 3, possible 4 drive-through bunkers and a 19
support building, (3 support buildings have been dis- 20
mantled). 21
7. SIGNIFICANCE: Ammunition depot supports the 325th In- 22
fantry Division and 270th Independent Infantry Regiment, 23
including elements moving into RVN. Capable and suspected 24
of supporting PAVN and PL in the Tchepone area, Laos. 25
8. TARGET ENVIRONMENT: Storage area spreads over about 26
35 acres in rolling low hills. To the west elevations rise 27
to 500 and 1000 feet. Area unpopulated. Mountains with 28
elevations of over 2000 feet lay to the NW and SW. 29
9. DEFENSE ENVIRONMENT: 30
 - a. There is 1 active, 4 position light (14.5 - 37mm) AAA 31
site located at 17-07-05N/106-45-20E (XD 871933). All 32
positions were occupied as of 10 February 1965. In the 33
Chap Le - Vinh Linh area, about 14 NM east, there are 34
5 active and 17 inactive sites, amounting to 21 light AAA 35
and 78 unoccupied positions (8 - 14 Feb 65). 36
 - b. The installation falls within the defenses of the 37
DMZ headquarters and is probably operationally supported 38
by the 325th Infantry Division at Dong Hoi. In the DMZ 39
complex the principal operational unit is the over-strength 40
270th Independent Infantry Regiment from which defense 41
support would be available. Strength of the 270th Regt is 42
estimated at 5,000. There are probably 13,000 operational 43
troops in the Dong Hoi area. 44

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A-C-BU-2

Tab BU to
Annex C to
Appendix A

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c. A RUS-2 early warning radar is located within 10 NM of Lang Mo (17-10-00N/106-22-00E), approximately 20 NM ENE. Vinh Linh early warning radars, 25 NM east, include a RUS-2 and a SCR-270 within 1 NM of 1705/10707E and a KNIFEREST--B within 5 NM of 1705N/10700E.

10. DAMAGE OBJECTIVE: Destruction of stored ammunition in storage area and casualties to personnel in support area. Damage criteria are one hit per storage structure and structural damage to support buildings with accompanying damage to contents and casualties to personnel. Damage level is 30 percent.

11. EFFECT ON NVN: Reduced support capabilities to NVN units stationed in area. Loss of direct support capability to PAVN forces operating in RVN and Laos requiring circuitous routing from other NVN sites.

12. RECUPERABILITY: Partial operation and shipment of some ammunition to elements of the 325th Division and 270th Regt could begin at once. Repair of storage bunkers and revetments could probably be made in approximately 5-7 days. Replacement ammo would have to be shipped on Route 1 when made available from other depots. Full recuperation could be attained in approximately 3 weeks.

13. COLLATERAL DAMAGE: Insignificant.

14. RECOMMENDED WEAPONS AND SORTIES:

a. This is a large target complex comprised of three areas. Weapons and sorties have been computed for each area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target is also shown.

(1) In order to achieve a damage level of 30% weapons/sorties required over target:

Weapon:	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	750# BOMB
Area A	129/11		162/14		162/18		162/27
Area B	14/1		28/2		22/3		18/3
Area C	260/22		316/26		316/35		316/53
Totals:	403/34		506/42		500/56		496/83

(2) Weapons/sorties operationally required to achieve "over target" requirement shown above:

493/42	618/51	610/68	608/101
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15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%.

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A-C-BU-3

Tab BU to
Annex C to
Appendix A

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TAB A-V: TO ANNEX C TO APPENDIX A

TARGET NO. 65.8



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A-C-BV2-1

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 65.8 1
2. BE NUMBER: 616-1476 2
3. IDENTIFICATION: Hanoi SAM Support Facility 3
4. DATE OF INFORMATION: 14 June 1966 4
DATE OF TIS: 20 June 1966 5
DATE OF PHOTOGRAPHY: 15 October 1965 6
DATE OF INTELLIGENCE REVIEW: 28 October 1965 7
5. LOCATION: 20-44-58N 105-39-10E, UTM WH 680940, 20 NM SW of Hanoi, 4 NM NNW of Cao Duong, and 12 NM SSE of SAM site B-25-2 (Site #11). 8
10
6. DESCRIPTION: Facility contains 7 drive-through buildings, 16 support buildings, 2 possible cave-storage areas, 2 unidentified vehicles, 1 missile transporter, 1 probable missile transporter, unidentified buildings under construction, a possible barracks area, and a storage area containing five buildings, each building being 82 ft x 21 ft, furnishing an enclosed storage area of 8,610 sq ft. 11
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7. SIGNIFICANCE: This constitutes the first SAM support facility confirmed in North Vietnam. The establishment of a support facility in this area, within 25 NM of 18 previously identified SAM sites, materially enhances NVN capabilities for supporting SAM operations by permitting a reduction in the number of support-type personnel and amount of support equipment required at individual SAM sites. 18
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8. TARGET ENVIRONMENT: Target is located on flat lowland in an area containing many low limestone ridges which are particularly suitable for digging storage caves. The area is served by an extensive road network which is believed capable of handling missile and missile-associated equipment transport. 25
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9. DEFENSE ENVIRONMENT: 31
 - a. Six SAM sites have been identified within SA-2 missile range (17.5 NM) of the target, and 18 additional SAM sites have been identified 18-30 NM distant. 32
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 - b. There is no identified AAA activity in the immediate target vicinity. However, activity exists at Dong Em (6 active sites of 14 occupied 57/85-mm revetments and 16 occupied 37-mm revetments) 1 NM SSW and Lang Geo (4 inactive sites) approximately 5 1/2 NM south. 35
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 - c. Moderate HMG and small arms fire is anticipated. 40

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A-C-BVg-2

Tab LVg to
Annex C to
Appendix A

(Revised by 8th Note to Holders)

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10. DAMAGE OBJECTIVE: Destruction of the facility and transportation support.

11. EFFECT ON DRV: Destruction of new, costly and sophisticated air defense missiles and equipment, and the loss of support to SAM sites serviced by this facility would seriously weaken the DRV air defense capability in the area south of Hanoi.

12. RECUPERABILITY: The time of recovery would depend primarily on the availability of replacement equipment which is an unknown factor; however, the proximity of Hanoi (approximately 20 NM) which is believed to have adequate replacement equipment, probably would permit limited recovery within 2 days, and full recovery within 10 days. If, as can be assumed, the caves are being used for the storage of vital equipment, the recovery time could be reduced by half. However, if replacement equipment, i.e., missile transporters, and handling cranes are not available in DRV, up to 20 days would probably be required to transport this material from the USSR.

13. COLLATERAL DAMAGE: Insignificant.

14. RECOMMENDED WEAPONS AND SORTIES:

This support facility, the first of its kind confirmed in North Vietnam, is comprised of 4 areas. Weapons and sorties have been computed for each area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target are also shown:

(1) In order to achieve a damage level of 30%, weapons/sorties required over target:

WEAPON:	250# <u>SNAKEYE</u>	or	250# <u>BOMB</u>	or	500# <u>BOMB</u>	or	750# <u>BOMB</u>	
Area A	16/1		46/4		24/3		14/2	30
Area B	11/1		35/3		18/2		11/2	31
Area C	24/2		68/5		35/4		21/4	32
Area D	16/1		46/4		24/2		14/2	33
Totals	67/5		195/16		101/11		60/10	34

(2) Weapons/sorties operationally required to achieve "over target" requirement shown above:

82/7	238/20	123/14	73/12	37
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(3) In order to achieve a damage level of 70%, weapons/sorties required over target:

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A-C-BVg-3

Tab BVg to
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Appendix A

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WEAPON:	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	750# BOMB	
Area A	54/5		155/13		81/9		48/8	1
Area B	37/3		118/10		61/7		37/6	2
Area C	81/7		230/19		118/13		71/12	3
Area D	54/4		155/13		81/9		48/8	4
Totals	226/19		658/55		341/38		204/34	5

(4) Weapons/sorties operationally required to
achieve "over target" requirement shown above:

276/23	802/67	416/46	249/42	6
				7

15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50% 8

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A-C-BVg-4

Tab BVg to
Annex C to
Appendix A

(Revised by 6th Note to Holders - 25 March 1966)

1947 RV-2

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REVISION OF APPENDIX A TO ENCLOSURE A

TO

JCS 2343/383-2

VOLUME III

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~~SECRET~~

NORTH VIETNAM

WORLDWIDE INTERNATIONAL RADIO TRAINING STATION



1. DATE OF PHOTO 18 OCTOBER 1967
 2. DATE OF INTELLIGENCE REVIEW 10 JANUARY 1968
 3. DATE OF REFERENCE 18 OCTOBER 1967

NO FOREIGN DISSEM

~~SECRET~~

444

Reviewed by 15th N/11

A 6-1386-1

Annex C. To Appendix A

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 66 1
2. B.E. NUMBER: 616-0164 2
3. IDENTIFICATION: Ha Noi Intl Radcom Xmtr Station, Dai Mo 3
4. DATE OF INFORMATION: 10 January 1968 4
DATE OF TIS: 11 March 1968 5
DATE OF PHOTOGRAPHY: 18 October 1967 6
DATE OF INTELLIGENCE REVIEW: 10 January 1968 7
5. LOCATION: 20-58-48N 105-46-01E 8
6. DESCRIPTION: A radiocommunication transmitting facility located 9
0.9 NM SE of Dai Mo and 5.7 NM SW of Ha Noi. Installation consists of 10
walled secured control area (A) containing a revetted transmitter building, 11
a probable personnel bunker, 8 support buildings, and two cooling 12
ponds. A secured support area (B) is immediately NE of area (A) and contains 13
4 probable barracks, 1 messhall, and 10 support buildings. A secured area 14
C, S of area (A) contains 2 large bunkered buildings and probably serves as an 15
alternate control area. The antenna field surrounds area (A) and consists of 16
two sets of double rhombic antennas in day/night pairs, two double rhombic 17
antennas, seven single rhombic antennas, four V type antennas, and twelve 18
horizontal dipole antennas.
7. SIGNIFICANCE: This is the largest and best equipped radio transmission 19
facility in North Vietnam, and is believed to jointly serve civil and military depart- 20
ments of the government as well as the general public. Facility is the focal point 21
for international radio communications. The Ministry of National Defense could 22
use this facility for long range radio communications to such overseas areas as 23
Communist China, USSR, and Cuba. Normally this type of radio installation would 24
not be used to support low-level tactical radio communications to NVA units 25
operating in South Vietnam and Laos.
8. TARGET ENVIRONMENT: Target is about 20 feet above sea level. 5.7 26
NM SW of Ha Noi and 1.25 NM NW of Ha Dong. It is situated on a flat plain, planted 27
mostly to wetland rice. There are numerous small villages within 5 NM of the 28
target. The plain is laced with dikes, ditches, canals, and streams. The larger 29
streams are the NW-SE oriented Song Nhue Giang, about 1 NM to the NE, and 30
Red River about 7 NM to the NE. A large canal extends SW from the Song Nhue 31
Giang at Ha Dong. A horseshoe-shaped lake with a dam on the northern leg is 32
located 4.5 NM ESE of the target. About 20 NM to the west, rugged NW-SE 33
oriented mountains rise to about 3300 feet above the plain. Access to Ha Noi is 34
via road SE to Ha Dong, then NE to Ha Noi. 35

~~SECRET~~ NO FOREIGN DISSEM EXCLUDED FROM AUTOMATIC DOWNGRADING

A-C-BW-2

Tab BW to
Annex C to
Appendix A

(Revised by 13th Note to Holders)

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9. DEFENSE ENVIRONMENT:

- a. The target is within the SAM envelope.
- b. AAA activity has been identified within 3 NM of the target.
- c. HMG and small arms fire is anticipated.

10. DAMAGE OBJECTIVE: Destruction of operation buildings and antenna towers. Damage level is 70%.

11. EFFECT ON NVN: Destruction of this radio transmitter facility would disrupt NVN international radio communications and would cause overloading of other transmitting facilities in the Ha Noi area. Defense radio communications within NVN and to South Vietnam/Laos areas would not be seriously affected as other radio facilities are available.

12. RECUPERABILITY:

- a. Destruction of buildings housing electronic facilities would cause about 75% damage to equipment. Very little would be recoverable.
- b. Repair of buildings would take about 2-4 weeks.
- c. Electronic equipment could be repaired or replaced in about 1-3 months, and antenna field repaired in about 1 week, all dependent on sources of equipment and availability of technical assistance.

13. COLLATERAL DAMAGE:

a. None

Population				Casualties*			
Target Area		Adjacent Area		Target Area		Adjacent Area	
Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ
75	25	0	0	5	2	0	0

*Casualties estimated under daylight alert conditions

14. RECOMMENDED WEAPONS AND SORTIES:

This facility is comprised of 3 areas, exclusive of the antenna field. Two areas have been delineated for weapons application. Weapons and sorties have been computed for each area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target are also shown:

- (1) In order to achieve a damage level of 30%, weapons/sorties required over target:

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A-C-BW-3

Tab BW to
Annex C to
Appendix A

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WEAPON	500# BOMB	or	750# BOMB	or	1000# BOMB	or	2000# BOMB	
Area B	226/25		175/29		142/47		121/121	1
Area D	188/21		91/15		78/26		31/31	2
Area E	236/26		138/23		121/40		64/64	3
Area F	330/37		152/26		125/42		51/51	4
Total	980/109		556/93		466/155		267/267	5
(4) Weapons/scrties operationally required to achieve "over target" requirements shown above:								6
								7
	1195/133		678/113		568/190		326/326	8
15. <u>PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%</u>								9

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A-C-DA-5
(Revised by 9th Note to Holders)

Tab DA to
Annex C to
Appendix A

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REGRET

TAB DA1 TO ANNEX C TO APPENDIX A
TARGET NO. 00.1



See by 17th N 11)

A-2-1.A-1-1

Tab DAa to Annex C
to Appendix A

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 69.1 1
2. B.E. NUMBER: 615-0292 2
3. IDENTIFICATION: Hon Gai Approaches/Mineable Area 3
4. DATE OF INFORMATION: 23 February 1971 4
DATE OF TISD: 23 February 1971 5
DATE OF PHOTOGRAPHY: Not Applicable 6
DATE OF INTELLIGENCE REVIEW: 23 February 1971 7
5. LOCATION: 20-47-45N 107-09-30E (Approximate center of Area DELTA - the primary channel), 10.5 NM SE of maritime port of Hon Gai. 8
9
6. DESCRIPTION: The four primary mining areas which control deepwater access routes to Hon Gai Port have been delineated. 10
11
 - a. Area DELTA, (1.0 x 1.2 NM), lies in Passe Henriette, E of Ile De L'union. Depths vary from 28' to 60'. 12
13
 - b. Area CHARLIE, (0.7 x 0.3 NM), lies in Passe, Profonde, W of Ile De L'union. Depths range from 78' to 90'. 14
15
 - c. Area ECHO, (0.5 x 1.0 NM), lies along the southern portion of Passe du Vaico, where it merges with Passe Du Pluvier. Depths vary from 24' to 42'. 16
17
18
 - d. Area FOXTROT (0.5 x 1.0 NM), lies along Passe De L'aspic, E Area FOXTROT. Depths range from 22' to 39'. 19
20
 - e. Tidal rises: 4.6' MLLW, 12.3' above datum at MHHW. Currents main a velocity of 3 kts. 21
22
7. SIGNIFICANCE: These mineable areas control the 4 deepwater access routes to Hon Gai port and naval base. The Hon Gai port is the alternate NVN commercial port nearest to Haiphong. Hon Gai Naval Base Bai Chay is headquarters of the Northern Fleet. It is a base for navy patrol craft and as a POL and torpedo distribution point for naval vessels anchored in the Cac Ba Island area. 23
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- TARGET ENVIRONMENT: Four primary mineable areas located approximately 10-12 NM S and SE of Hon Gai among many steep-sloped islands. Area DELTA located in Passe Henriette on W side of Ile De L'union and 1-2 NM SSE of Ile Des Arenes (max. elev. 689'). Area CHARLIE located 10 NM SSE of Hon Gai; area is on E side of Ile de Cac Ba (max. elev. 1,086') and W side of Ile De L'union (max. elev. 784'). Area ECHO located 10 NM SE of Hon Gai, 1 NM E of Ile Des Arenes, and 2 NM S of Ile du Brandon (max. elev. 564'). Area FOXTROT located 11.5 NM SE of Hon Gai, 2 NM SE of Ile du Brandon, 3 NM E of Ile Des Arenes, and 2 NM W of Ile de la Meduse (max. elev. 584'). 30
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~~SECRET~~ NO FOREIGN DISSEM EXCLUDED FROM AUTOMATIC DOWNGRADING
A-C-DAA-2
(Revised by I7th Note to Holders)

Tab DAa to
Annex C to
Appendix A

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9. DEFENSE ENVIRONMENT: 1
- a. The target is within the SAM envelope. 2
- b. AAA activity has been identified within 3 NM of the target. 3
- c. HMG and small arms fire is anticipated. 4
10. DAMAGE OBJECTIVE: Interdict NVN naval craft and coastal 5
vessels; restrict deepwater access to Hon Gai port and naval base 6
complex. 7
11. EFFECT ON NVN: Deterioration of support capability to 8
northern fleet area, a major reduction in capability to export coal, 9
and consequent loss of foreign exchange credits. 10
12. RECUPERABILITY: At present, NVN has only very limited 11
minesweep capability. 12
13. COLLATERAL DAMAGE: Possible damage to fishing craft transiting 13
the area. 14
14. RECOMMENDED WEAPONS (MINEABLE AREAS): 15
- Over Target 16
- | | | |
|--------------|--------------|----|
| <u>MK 52</u> | <u>MK 55</u> | 17 |
| 114 | 11 | 18 |
15. PROBABILITY OF MODERATE DAMAGE TO A SINGLE SHIP TRANSITING THE 19
MINEFIELD AREA (ALL FIELDS COMBINED): 30% 20

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A-C-DAA-3
(Revised by 17th Note to Holders)

Tab DAa to
Annex C to
Appendix A

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TAB DB TO ANNEX C TO APPENDIX A

TARGET NO. 70



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(Revised by 14th N/H)

A-C-DB-1

Tab DB To Annex C
To Appendix A

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 70 1
2. BE NUMBERS: 616-0001 - Hai Phong Port Facilities 2
616-0004 - Hai Phong Naval Base 3
616-0054 - Hai Phong Ship Repair Yard No. 3, 4
Sauvage 5
616-0671 - Hai Phong Shipyard No. 4, Dancette 6
616-0672 - Hai Phong Ship Repair Yard No. 1 7
616-0673 - Hai Phong Ship Repair Yard No. 2, 8
S.A.C.R.I.C. 9
616-2140 - Hai Phong Shipyard North 10
616-2088 - Hai Phong Shipyard West 11
3. IDENTIFICATION: Hai Phong Port Complex 12
4. DATE OF INFORMATION: 6 March 1968 13
DATE OF TIS: 25 April 1968 14
DATE OF PHOTOGRAPHY: 4 October 1967 15
DATE OF INTELLIGENCE REVIEW: 7 March 1968 16
5. LOCATION: 20-51-37N 106-41-08E (Central reference point 17
only - Not an individual BE number coordinate). 18
6. DESCRIPTION: The Hai Phong Port Complex is composed of 19
six shipyards, a naval base, and the port facilities themselves. 20
The following intelligence information pertains to areas (with 21
3 sub-areas): 22
- a. Areas E-1, E-2, and E-3 are covered storage sites 23
within the Hai Phong Port Facilities. Area E-1 contains 4 24
warehouses with approximately 100,000 sq. ft. gross floor area; 25
Area E-2 contains 5 warehouses with over 200,000 sq. ft.; 26
Area E-3 contains about 30,000 cu. ft. of refrigerated storage. 27
Area E-4 Hospital wharf area, in addition to offloading imports, 28
is used extensively for transshipping cargo into coasters, barges, 29
and junks. An additional deep-draft wharf is under construction 30
in this area. Most of the warehouses are of steel frame 31
construction with concrete walls and floors and galvanized sheet 32
steel roofs. Adjacent to the delineated target areas are 4,370 33
linear feet of offshore wharfage; a single meter-gage rail line 34
and several two-lane roads clear the port area. 35
- b. Area F is the Hai Phong Ship Repair Yard No. 1 36
(BE No. 616-0672). Facilities here include 3 marine railways, 37
a transverser and 34 support buildings. 38
- c. Area D lies within the Hai Phong Naval Base (BE No. 39
616-0004). Its facilities include a repair yard with a graving 40
dock 160 ft. long, a small marine railway, a repair yard, 8 41
small shops; a 2-story school building; 4 barracks, 3 of which 42
are 2 stories; 9 warehouses; 5 supply/support buildings; 9 43
unidentified buildings; and berthing facilities. Most of the 44
buildings are of concrete construction, some have tile roofs, 45
and some have corrugated sheet steel roofs. 46

~~SECRET~~ NO FOREIGN DISSEM EXCLUDED FROM AUTOMATIC DOWNGRADING

A-C-DB-2
(REVISED BY 14TH NOTE TO HOLDERS)

Tab DB to
Annex C to
Appendix A

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d. Area C is Hai Phong Shipyard No. 4, Dancette (BE No. 616-0671. The machine shop section, Area C-1, includes five large fabrication/machine shop buildings, the largest approximately 400 ft. long. The yard has four marine railways and a graving dock with an overall length about 210 ft., and 23 support buildings.

e. Area A is the Hai Phong Ship Repair Yard No. 2, S.A.C.R.I.C. (BE NO. 616-0673) which contains two graving docks, the largest 175 ft. long, one side-launch building way about 320 ft. long, 17 fabrication and machine shops, and 16 support buildings.

f. Area B is the Hai Phong Ship Repair Yard No. 3, Sauvage (BE No. 616-0054) which includes 4 graving docks, the largest about 150 ft. long; two marine railways; and 40 support buildings.

g. Area G is the Hai Phong Shipyard North (BE No. 616-2140) which contains two graving docks, each about 155 ft. long, and 3 support buildings.

h. Area H is the Hai Phong Shipyard West (BE No. 616-2088) which contains 2 graving docks 200 ft. long, 2 building ways, and 14 support buildings.

7. SIGNIFICANCE: Hai Phong port handles about 80% of all NVN maritime shipping, including 95% of POL receipts. Its military port capacity is estimated at 3,800 short tons per 20-hour work day. Hai Phong is the main repair base and principal source of logistic support for the North Vietnam naval forces. It is the only NVN Naval Base with a graving dock capable of drydocking the SO 1 class subchaser, the largest unit in the North Vietnam Naval Order of Battle. It is used as a base by submarine chasers, motor gunboats and fast patrol boats attached to the northern fleet. The naval school there trains officer candidates and enlisted specialists. The ship repair facilities located in Hai Phong are the most important in the country. Yards 1 thru 3 fabricate and repair tugs, lighters, fishing, and coastal vessels. Shipyard 4 (Area C) is the most important in Hai Phong. It assembles barges in addition to the craft types mentioned above. Hai Phong Shipyards North and West also have minor repair facilities. The Hai Phong Port Complex as a whole encompasses a highly significant portion of the NVN maritime sector.

8. TARGET ENVIRONMENT: Target near sea level, about 10 NM NW of Gulf of Tonkin. Target, at north edge of Hai Phong, is along the south bank of the SE-flowing Cua Cam (river). The city is on a broad, flat, plain intensively cultivated in wetland rice. The plain contains NW-SE oriented meandering streams and randomly oriented, interconnecting distributaries and canals; most waterways are contained by levees. Roads converge on city from all directions; principal road and rail line enter city from the NW, about 0.5 NM west of target and lead to the target area. Stadium and amphitheater 1 NM south of target are easily distinguishable. Industries lining south bank of Cua Cam are backed by residential areas. North side of river lined by mudflats. Numerous small piers and thousands of feet of quayed canal sides and retaining walls exist along river near the port, mostly on the Song Tram Bac, Song Dao Ha Ly, and Song Lap. These could be used by lighters and small craft as alternate landing facilities for transfer of cargo from deep water vessels. The closest alternate naval facility is Hon Gai/Bai Chay.

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9. DEFENSE ENVIRONMENT: 1
- a. The target is within the SAM envelope. 2
- b. AAA activity has been identified within 3 NM of the 3
target. 4
- c. HMG and small arms fire is anticipated. 5
10. DAMAGE OBJECTIVE: Damage level for Hai Phong Port Complex 6
is 30% throughout target areas. Damage criteria for individual 7
areas are as follows: 8
- a. Areas E-1, E-2, E-3, and E-4: Disruption of port 9
cargo-handling operations thru structural damage to warehouses, 10
and transit sheds with accompanying damage to other port 11
facilities, and the sinking of cargo ships. 12
- b. Area D: Criterion is deterioration of NVN naval/ 13
logistic/repair capability thru structural damage to supply/ 14
support buildings and repair facilities with accompanying damage 15
to naval units undergoing repair in the graving dock, marine 16
railway, and repair yard. 17
- c. Areas F, C, A, B, and H. Disruption of repair activity 18
thru damage to marine railways and graving docks with accompanying 19
damage to machinery, equipment, and power facilities. 20
11. EFFECT ON NVN: Reduction of port facilities will significantly 21
reduce capability of NVN to accommodate deep-draft vessels along- 22
side and consequently create severe delays and handling problems 23
by forcing the use of lightering cargo ashore. International 24
shipping would be discouraged from visiting the port and maritime 25
receipts would be significantly reduced. The North Vietnamese 26
Navy would suffer a severe reduction in support/repair 27
capability and resultant deterioration of coastal patrol and 28
combatant capability. Damage to ship construction and repair 29
yards would deprive NVN of a significant portion of this industry 30
and compound problems created by the destruction of port and naval 31
facilities. 32
12. RECUPERABILITY: 33
- a. Areas E-1, E-2, E-3, E-4: (Based on 30% damage to storage 34
facilities and 15% accompanying damage to wharfage.) 35
- | | | |
|-----------------------------------------------------------------------------------------------|---------------|----------------|
| Damage assessment: | 7 days | 36 |
| Debris clearance and procurement
of repair material: | 3 days | 37
38 |
| Temporary repairs to wharfage: | 12 days | 40 |
| Temporary repair to covered storage: | <u>6 days</u> | 41 |
| Total time required for restoration of
former port cargo-handling and
storage capacity: | 28 days | 42
43
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A-C-DB-4
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Note: The above excludes salvage of sunken ships or restoration of cold storage capacity. Those efforts would probably depend on aid from the Soviet Union or Communist China.

b. Area D

Damage assessment: 1 day
Clearing debris and procurement of lumber: 2 days
Repair of wharves, including approaches and buildings: 6 days
Total for restoration of alongside naval berthing and light repair capability: 9 days

Note: Naval craft replacement indefinite.

c. Areas F, C, A, B, G, and H: Damage to fabrication and machine shops, graving docks, and marine railways would seriously limit normal repair yard capability for one to two years dependent on the amount of Sino/Soviet Bloc assistance rendered for yard reconstruction. Lighter production could probably be continued at a reduced rate.

13. COLLATERAL DAMAGE:

a. Minor damage to surrounding area.

Population				Casualties*			
Target Area		Adjacent Area		Target Area		Adjacent Area	
Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ
250	3800	1410	9700	15	228	14	97

* Casualties estimated under daylight alert conditions.

14. RECOMMENDED WEAPONS AND SORTIES:

This is a large port complex and is comprised of eight areas (with sub-areas). One area and 10 sub-areas have been delineated for weapons application. Weapons and sorties have been computed for each area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target are also shown:

(1) In order to achieve a damage level of 30%, weapons/sorties required over target:

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WEAPON	500# SNAKEYE	750# BOMB	
Area A-1 (200 x 500)	14/2	17/3	1
Area A-2 (350 x 450)	21/2	19/3	2
Area B-1 (200 x 2300)	43/5	55/9	3
Area C-1 (600 x 900)	157/17	89/15	4
Area D-1 (200 x 1650)	135/15	190/32	5
Area E-1 (550 x 1150)	67/7	41/7	6
Area E-2 (300 x 1900)	62/7	46/8	7
Area E-3 (250 x 600)	20/2	20/3	8
Area F-1 (300 x 1150)	39/4	30/5	9
Area G-1 (250 x 300)	13/1	14/2	10
Area H (450 x 750)	38/4	30/5	11
Totals	609/66	551/92	12

(2) Weapons/sorties operationally required to achieve "over target" requirements shown above:

730/81

660/110

(3) In order to achieve a damage level of 70%, weapons/sorties required over target:

WEAPON	500# SNAKEYE	750# BOMB	
Area A-1	48/5	58/10	13
Area A-2	71/8	64/11	14
Area B-1	145/16	186/31	15
Area C-1	540/60	300/50	16
Area D-1	455/51	640/107	17
Area E-1	226/25	138/23	18
Area E-2	209/26	155/26	19
Area E-3	68/8	68/11	20
Area F-1	132/15	101/17	21
Area G-1	44/5	48/8	22
Area H	128/14	101/17	23
Totals	2066/230	1859/311	24

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(4) Weapons/sorties operationally required to
achieve "over target" requirements shown above:

2479/275

2231/372

15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%

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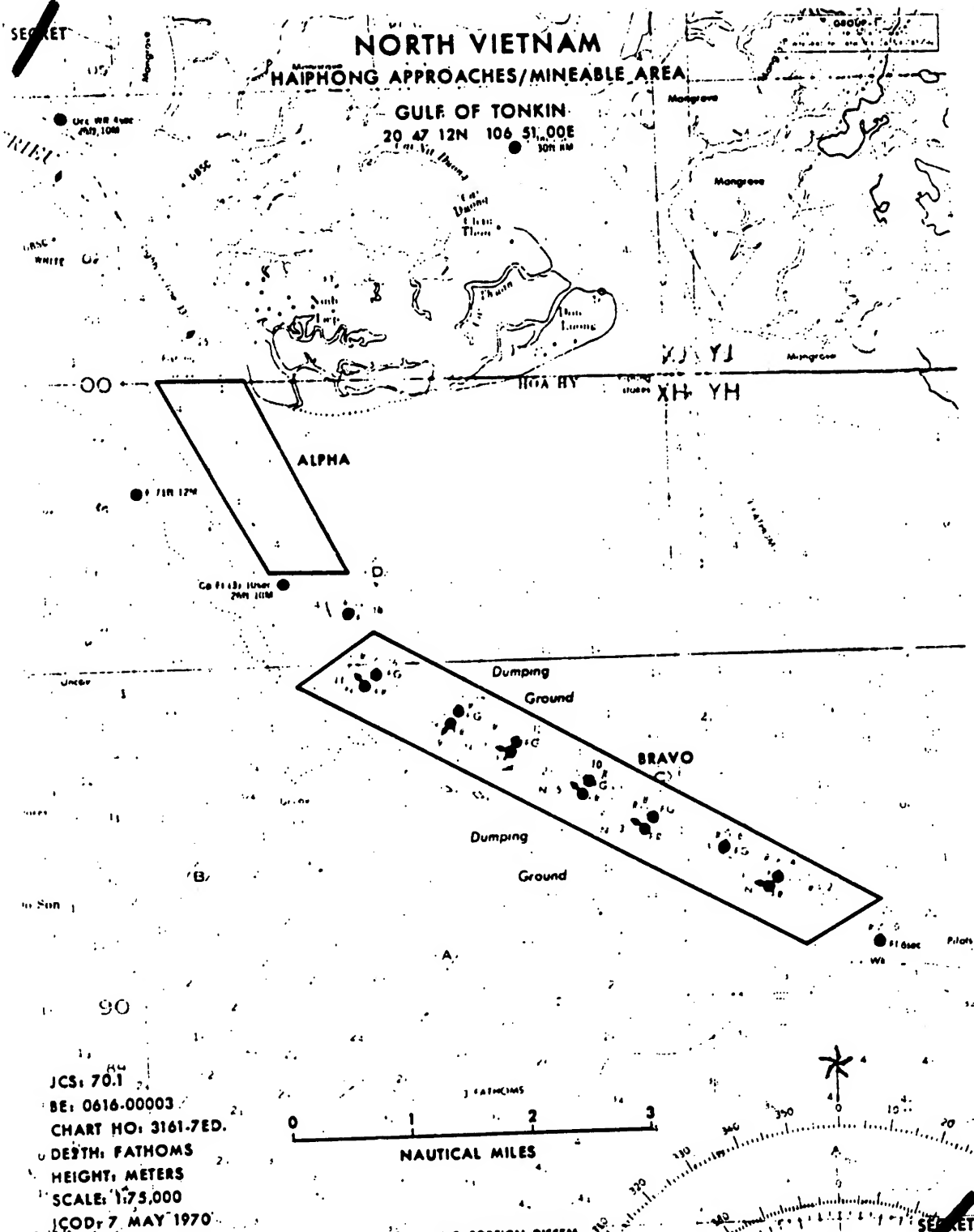
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TAB DC TO ANNEX C TO APPENDIX A
TARGET NO. 70.1

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 70.1 1
2. BE NUMBER: 616-0003 2
3. IDENTIFICATION: Hai Phong Mineable Area Gulf of Tonkin 3
4. DATE OF INFORMATION: 22 February 1971 4
DATE OF TIS: 23 February 1971 5
DATE OF PHOTOGRAPHY: Not Applicable 6
DATE OF INTELLIGENCE REVIEW: 22 February 1971 7
5. LOCATION: 20-47-12N 106-51-00E. 8
6. DESCRIPTION: The approach to Hai Phong from the Gulf of Tonkin is 9
through a dredged channel across the outer bar of the Cua Nam Trieu 10
(20-42-40N 106-56-40E) about 18 NM from the port. Channel 200 to 250 11
feet wide, about 5 NM long and normally dredged to 19.5 feet at chart 12
datum. The lack of dredging has allowed silting to reduce channel depth to 13
approximately 11 feet at chart datum. Depths increase to 30-50 feet 14
inside the bar and channel width increases to about 2000 feet as far 15
as Canal Maritime, 4 NM from the port. The Canal, which is a land cut about 16
0.75 NM long through Ile de Dinh Vu, is 500 feet wide and is normally 17
dredged to 19.5 feet at chart datum over a width of 295 feet. Depth 18
is currently about 16 feet. The channel through the Cua Cam from Canal 19
Maritime to the port has a width of 330 feet and a depth of about 20
15 feet at chart datum. The tidal rise at Hai Phong is 9.1 feet at 21
mean high water and 6.8 feet at minimum high water. 22
- a. Area Alpha (2.0 NM x 0.75 NM) encompasses the main channel just 23
north of the dredged bar. Central depths range from 30 to 50 feet. 24
- b. Area Bravo (4.5 NM x 0.75 NM) is located just southeastward 25
of area Alpha, along the dredged channel. Central depths in area 26
Bravo are 16' of chart datum with perimeter depths ranging from 3' to 27
16'. 28
7. SIGNIFICANCE: The mineable areas control the deep draft access to 29
the port of Hai Phong. About 99% of the seaborne imports in 1970 30
entered through the port of Hai Phong. This represents 90% of the 31
country's total imports. In addition, there is extensive coasting, 32
barge, and small craft traffic and frequent transits of naval vessels. 33
8. TARGET ENVIRONMENT: Target area located in the NNW-SSE-trending 34
channel of the Cua Nam Trieu (river mouth) about 10.4 NM ESE of Hai Phong. 35
Immediately NE of target area is a large, low island; southern half 36
covered by mangrove, northern half intensively cultivated in wetland rice. 37
Target area flanked on E and W by foreshore mud and sand flats which 38
uncover 1 to 3 feet at low water. Lighthouse located about 1.8 NM SSE 39
of target area in Gulf of Tonkin. Many fishing stakes in vicinity of 40
target area. 41
9. DEFENSE ENVIRONMENT: 42
- a. The target is within the SAM envelope. 43
- b. AAA activity has been identified within 3 NM of the target. 44
- c. HMG and small arms fire is anticipated. 45

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10. DAMAGE OBJECTIVE: Interdict NVN naval craft and to discourage ocean-going ships from entering the deep water port. 1
2
11. EFFECT ON NVN: Denial of these port facilities will greatly diminish seaborne imports into NVN and significantly reduce the country's ability to continue support to the PL/VC. Foreign flags serving NVN may not risk endangering their ships in furtherance of commercial gains. 3
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12. RECUPERABILITY: At present, the NVN has only very limited mine-sweep capability. 8
9
13. COLLATERAL DAMAGE: Possible damage to fishing craft transiting area. 10
11
14. RECOMMENDED WEAPONS (MINEABLE AREAS) 12
- | <u>Field</u> | <u>MK 50</u> | <u>MK 52</u> | |
|--------------|--------------|--------------|----------|
| Area A | 0 | 12 | 13
14 |
| Area B | 16 | 4 | 15 |
15. PROBABILITY OF MODERATE DAMAGE TO A SINGLE SHIP TRANSITING THE MINEFIELD AREA (ALL FIELDS COMBINED): 30% 16
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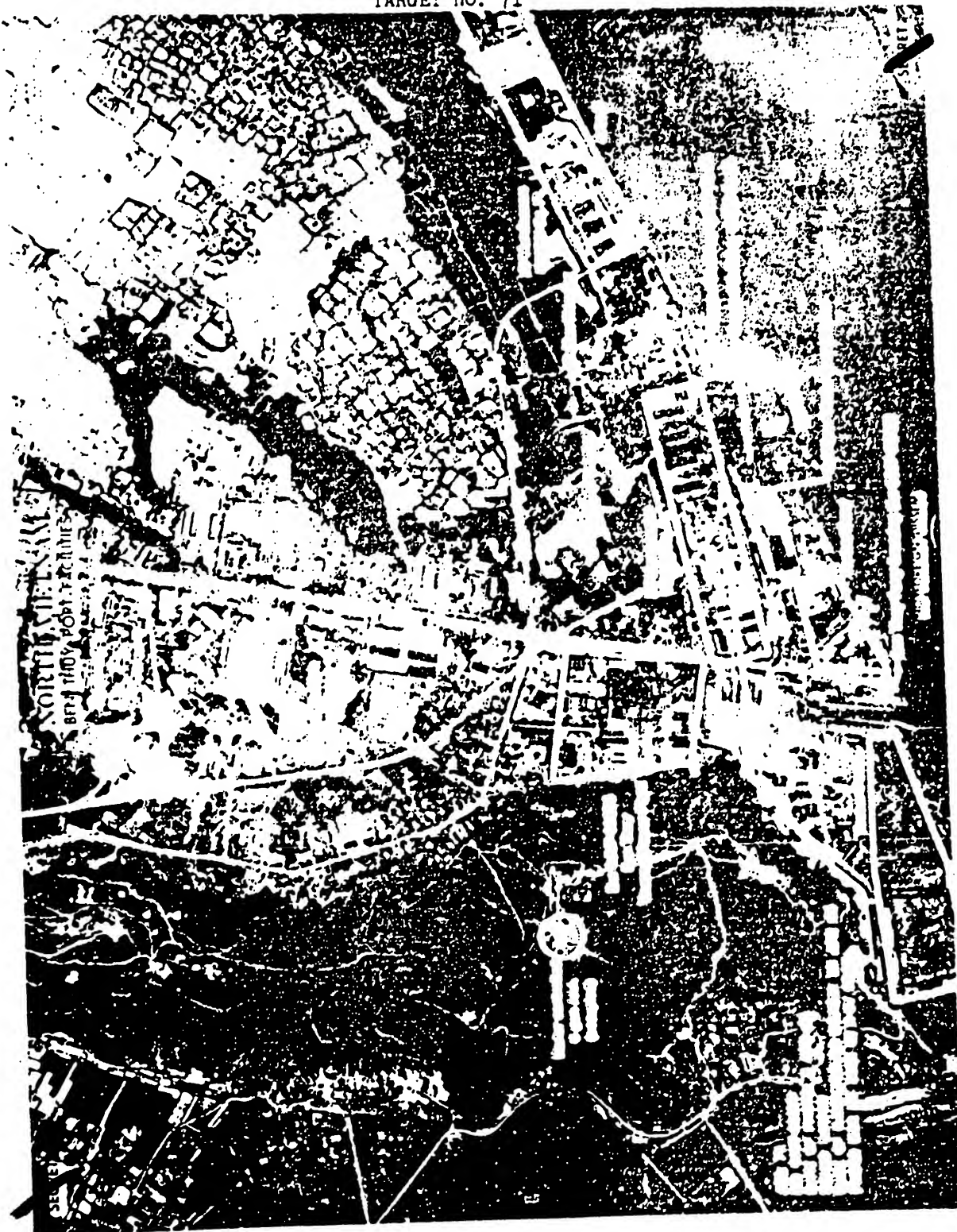
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TAB DD TO ANNEX C TO APPENDIX A

TARGET NO. 71



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Tab DD to Annex C
to Appendix A

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 71
2. BE NUMBER: 617-0038
3. IDENTIFICATION: Ben Thuy Coastal Transshipment Point
4. DATE OF INFORMATION: 3 March 1965 DATE OF TJS: 8 March 1965
5. LOCATION: 18 38 52N/105 42 39E (WF 749619)

6. DESCRIPTION: Military port capacity estimated at 600 long tons of general cargo per day (20 effective working hours). Facilities include: 1 principal offshore wharf with twin approaches; of wooden decking on braced timber piles; 500 ft. long by 33 ft. wide; 15 ft. alongside at chart datum; 2 general storage areas; southern of which consists of 4 concrete construction transit sheds and 19 other variously constructed buildings with total 130,050 sq ft storage area, northern area has 15 various-construction buildings providing an estimated 108,075 sq ft covered storage area; open bulk storage areas located throughout port. Single meter-gage rail line now under construction will clear port area to Vinh on completion of 2 remaining rail bridges; principal highway (Route 1) transits port area; ferry crossing of Song Ca. 1/4 mile upstream from wharf; no mechanical handling facilities. The port is located about 10 miles up the Song Ca River. A bar extends about 1/2 mile off the mouth of the river. It is of hard sand and subject to frequent change. A channel has been dredged through the bar to a depth of 14 ft (21 ft at MHHW). The width of the channel is not known. Inside the bar, the river is 1,000 ft to 1/2 mile wide with the fairway width generally about 400 ft wide as far as Ben Thuy. Central depths in the river are 12 to 30 ft. At Ben Thuy the river is about 1,500 ft wide with central depths of at least 15 feet. Tidal rises in the river are 6.8 ft at mean higher high water and 2.0 ft at mean lower low water. At some times tides range as much as 8 or 9 feet. With large tides the flood currents last about 6 hours and the ebb 18 hours. With small tides there is no flood current. During periods of high river from rains (mostly May-September) the currents can be very strong.

7. SIGNIFICANCE: Ben Thuy is the port facility for the Vinh industrial and military area and the only commercial port of any significance in southern DRV.

8. TARGET ENVIRONMENT: Center of target about 10 ft. above sea level, 0.5 Mi. E. of Ben Thuy and 2.7 mile SE of the center of Vinh. Target, 6.4 miles WSW of coast, is on NW side of meandering, NE-flowing Song Ca (river). Area is flat plain intensively cultivated in wetland rice and containing many small villages. Grass-covered hillock reaches 335 ft. above sea level 0.6 mile SW of target; another, grass and scrub-covered, reached 460 ft above sea level 1.4 mile SSE of target. N edge of N-S ridge 2.2 mile SE of target. SW tip of large island in Song Ca 0.5 mile NE of target center. Small stream, meandering to SE empties into Song Ca 0.7 mile SW of target. There are a few small piers at Ben Thuy usable only by small craft. Vinh Petroleum

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Products Storage (BE No. 617-0182) is located 1.3 miles downstream. Phuc Loi Naval Base (BE No. 617-0697) is about 10 miles downstream, and a new T-head pier has been completed at the mouth of the Song Ca, targeted as Hai Yen Port Facility (BE No. 617-0781).

9. DEFENSE ENVIRONMENT:

a. Ben Thuy lies within the extensive AAA network of the Vinh area, for which it serves as the principal port. In the area are located 13 active sites, containing 67 1t (57mm) or medium (85mm) AAA pieces plus 16 1t (14.5mm - 37mm) guns. (30 Jan 1965). There also are 12 inactive sites amounting to a total of 96 unoccupied positions.

b. Two independent infantry regiments are located in the immediate vicinity of Vinh (1 Jan 1965). Prepared AW positions are in troop areas.

c. Within a 15 NM radius of 18-40N 105-40E, are located the following radar:

- (1) 2 FIRECAN
- (2) 1 SCR-584
- (3) 1 KNIFEREST B
- (4) 1 RUS-2
- (5) 1 SCR-270

10. DAMAGE OBJECTIVE: Reduce port's overall capability by attack on facilities in the general wharf area and/or aerial mining of the approaches. Damage criterion is structural damage to buildings and damage to storage areas. Damage level is 30 percent. Mine the river approaches to interdict shallow draft river and coastal traffic.

11. EFFECT ON DRV: Reduction of maritime and coastal cargo movement into/from southern DRV and proportional disruption of DRV logistic support to Viet Cong forces via both land and sea.

12. RECUPERABILITY: Lumber is locally available; large saw mill located about 0.3 miles SW of wharf. Recuperability time is as follows:

- | | |
|-----------------------------------------------|---------------|
| a. Damage assessment: | 1 day |
| b. Clearing debris and procurement of timber: | 2 days |
| c. Repair of wharf including approaches | <u>3 days</u> |
| Total: | 5 days |

Note: The above estimate applies only to estimated 30% damage to the wharf and does not include consideration of destroyed storage buildings or goods in open storage.

13. COLLATERAL DAMAGE: Insignificant.

14. RECOMMENDED WEAPONS AND SORTIES:

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a. This is a large target complex comprised of two areas. Weapons and sorties have been computed for each area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target is also shown.

(1) In order to achieve a damage level of 30%, weapons/sorties required over target:

Weapon:	250# <u>SNAKEYE</u>	or	250# <u>BOMB</u>	or	500# <u>BOMB</u>	or	750# <u>BOMB</u>	
Area A	134/11		177/15		51/10		54/9	8
Area B	164/14		222/16		114/13		67/11	9
Totals:	299/25		399/33		205/23		121/20	10

(2) Weapons/sorties operationally required to achieve "over target" requirement shown above:

365/30	487/40	250/28	148/24	13
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(3) In order to achieve a damage level of 70%, weapons/sorties required over target:

Weapon:	*250# <u>SNAKEYE</u>	or	250# <u>BOMB</u>	or	500# <u>BOMB</u>	or	750# <u>BOMB</u>	
Area A	452/38		596/50		307/34		182/30	16
Area B	556/46		748/62		384/43		226/38	17
Totals:	1008/84		1344/112		691/77		408/68	18

(4) Weapons/sorties operationally required to achieve "over target" requirement shown above:

1229/102	1639/137	843/94	498/83	21
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15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50% 22

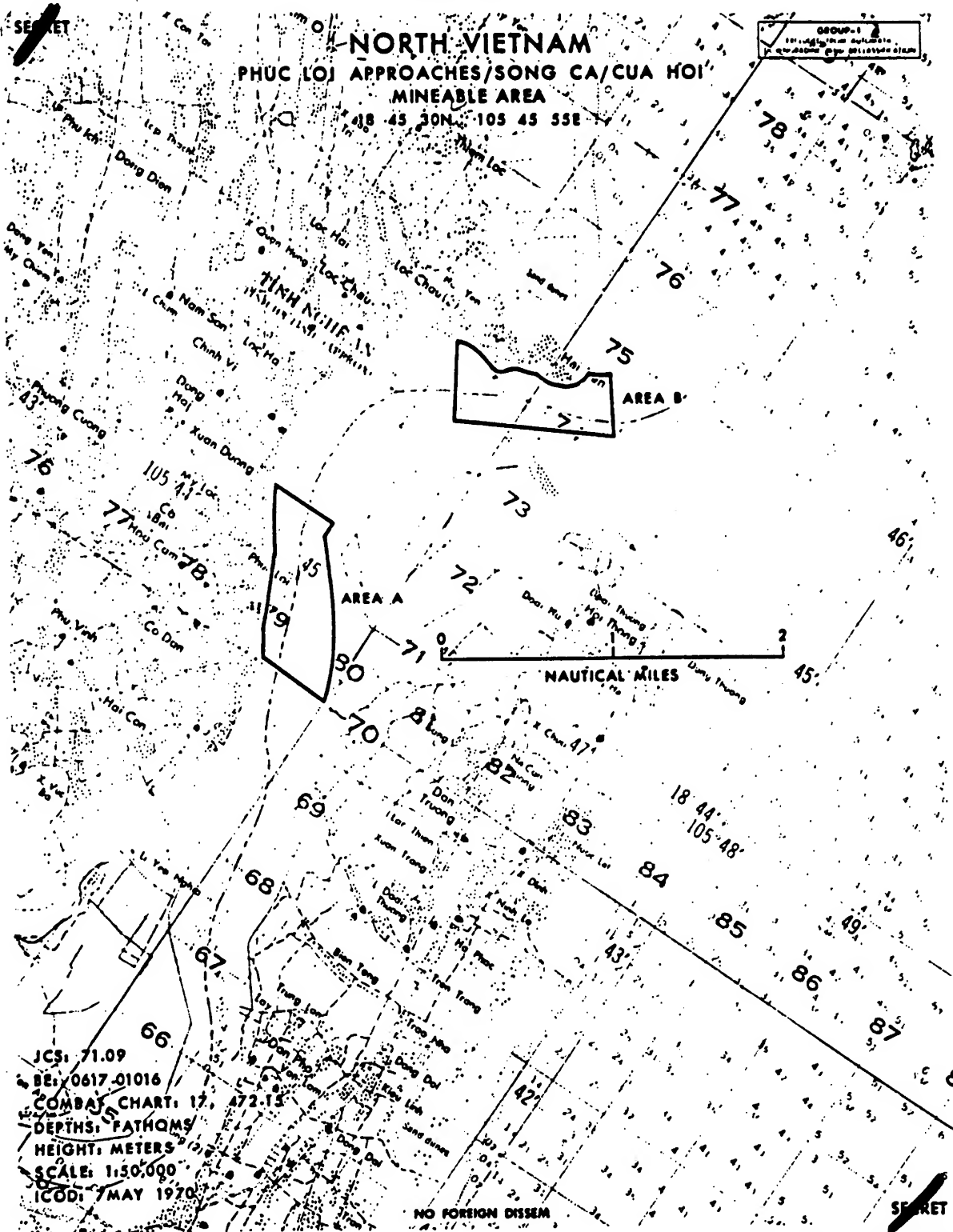
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TAB DDa TO ANNEX C TO APPENDIX A
TARGET NO. 71.09



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(Revised by 17th N/H)

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Tab DDa To Annex C
to Appendix A

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 71.09 1
2. BE NUMBER: 617-1016 2
3. IDENTIFICATION: Phuc Loi Approaches/Song Ca/Cua Hoi Mineable Area 3
4
4. DATE OF INFORMATION: 23 February 1971 5
DATE OF TISD: 23 February 1971 6
DATE OF PHOTOGRAPHY: Not Applicable 7
DATE OF INTELLIGENCE REVIEW: 23 February 1971 8
5. LOCATION: 18-45-30N 105-45-55E, located 7 NM NE (13 km) of Vinh. 9
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6. DESCRIPTION: Two areas which control access to the Song Ca (River) and Ben Thuy Coastal Transshipment Point (BE 617-0038) have been selected. 11
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 - a. Area ALPHA is located approximately 2 NM up river from the mouth of the Song Ca, and measures 1.0 NM x 0.4 NM; (shore to shore) at Phuc Loi. Central depths average about 20'. 14
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 - b. Area BRAVO is located at the mouth of the Song Ca across the pier of Hai Yen Port Facilities (BE 617-0781). It is 1.0 NM (1.9 km) long, 0.3 NM (0.6 m) wide with central depths generally ranging from 12' (3.7 m) to 33' (10.3 m). The bottom is mud and sand. 17
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 - c. Tidal rises are 6.8' (2.1 m) above datum at MHHW and 2' (0.6 m) at MLLW. Currents can be very strong during periods of high river (May-September). 21
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7. SIGNIFICANCE: These mineable areas lie athwart the channel leading to the Ben Thuy Coastal Transshipment Point (BE 617-0038, JCS target NO. 71), associated transshipment points, which serve the important Vinh military and industrial area. 24
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8. TARGET ENVIRONMENT: The Song Ca flows generally NE across a low coastal plain. The plain is about 20' (4.6 m) above sea level and contains long beach ridges approximately 6' (1.8 m) high and 1,000' (304 m) apart which parallel the coastline. Nearly all of the plain is covered with wetland rice except the ridge crests which are occupied by trees and villages. 28
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9. DEFENSE ENVIRONMENT: 34
 - a. The target is within the SAM envelope. 35
 - b. AAA activity has been identified within 3 NM of the target. 36
 - c. HMG and small arms fire is anticipated. 37
10. DAMAGE OBJECTIVE: Interdict NVN coastal cargo vessels and naval craft; restrict use of the port and naval facilities located along the Song Ca. 38
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11. EFFECT ON NVN: Reduction in coastal transport capability to southern NVN with consequent deterioration of NVN capability to support the Viet Cong insurgency.

12. RECUPERABILITY: At present, NVN has only a very limited minesweep capability.

13. COLLATERAL DAMAGE: Possible damage to fishing craft transiting the area.

14. RECOMMENDED WEAPONS (MINEABLE AREAS):

MK-36-1

MK-50

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15. PROBABILITY OF MODERATE DAMAGE TO A SINGLE SHIP TRANSITING THE MINEFIELD AREA (ALL FIELDS COMBINED): 30%

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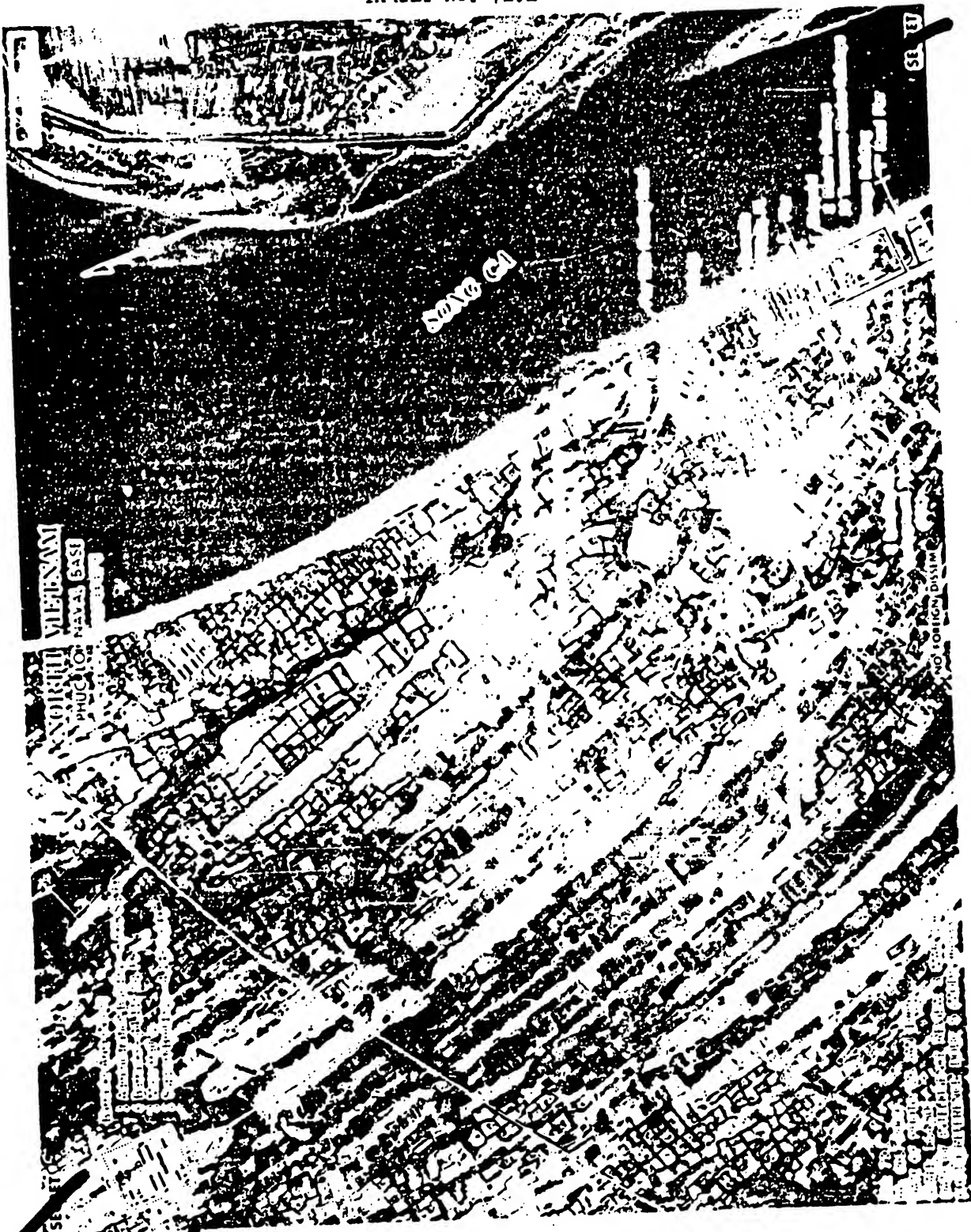
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TAB DE TO ANNEX C TO APPENDIX A

TARGET NO. 71.1



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to Appendix A

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 71.1 1
2. BE NUMBER: 617-0677 2
3. IDENTIFICATION: Phuc Loi Naval Base 3
4. DATE OF INFORMATION: 10 July 1966 DATE OF TIS: 24 May 1965 4
5
5. LOCATION: 18-43-44N/105-44-49E, UTM WP 787704 6
6. DESCRIPTION: Located 2 1/2 NM inland from the mouth of the Song Ca, Phuc Loi is designed to provide berthing, logistic support, and repair facilities for DRVN coastal patrol craft. It comprises four separate areas, the first of which is located on the shore of the Song Ca. This area contains one T-head pier, 170 feet long with a 320-foot approach, another pier 380 feet long with a 70-foot floating head, and a third pier approximately 325 feet long with a double L-head with runways of about 50 feet extending upstream. The latter pier is apparently designed to service construction vessels; the two former piers are used primarily for naval craft. Adjacent to the floating head pier is a small boat repair yard containing four quonset-type shop buildings and one probable administration building. South of the small boat repair yard is an area containing an administrative building, sixteen barracks, fourteen support buildings, and two workshops. Within this area is a twin-tracked marine railway with transferring facilities designed to accommodate as many as six patrol craft. Since construction activity is still in evidence, this facility may not as yet be operational. A second area, one NM west, contains two semi-buried POL storage tanks, an administrative building, mess hall and barracks. The third area, an additional NM northwest of the POL site, contains four revetted ammunition storage buildings. A nine-building barracks complex is located farther north, approximately eight NM from the shoreside area. All four of these areas are connected by hard-surfaced roads approximately 15 feet wide. The mineable area is shown on page A-C-DE-1b. 7
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7. SIGNIFICANCE: Its location on the Song Ca and its support facilities, both existent and under construction, provide Phuc Loi with an increased capability of supporting 6 to 8 additional patrol craft. 35
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8. TARGET ENVIRONMENT: Ben Thuy Port Facilities (617-0038-JCS Tgt. No. 71), located about 4 NM south, provides 500 feet of wharfage, POL storage (Vinh Petroleum Products Storage, 617-0182-JCS Tgt. No. 50), and quick access to Vinh, for which Ben Thuy is the port city. 39
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9. DEFENSE ENVIRONMENT:
 - a. Fifteen SAM sites have been identified within SA-2 missile range (17.5 NM) of the target, and 5 additional SAM sites have been identified 18-30 NM distant. 45
46
47
 - b. There are no identified AAA sites within 3 NM of the target. However, there are 27 active sites within the Hai Phong AAA Complex. (DOI: 20 July 1965 - 10 April 1966) 48
49
50
 - c. Moderate to intense HMG and small arms fire is anticipated throughout the Hai Phong Area. 51
52

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10. DAMAGE OBJECTIVE: Reduce the naval base capability of supporting and repairing "Swatow" class motor gun boats. Damage criterion is structural damage to storage, support, and repair buildings with accompanying damage to gun boats undergoing repairs at marine railway facilities which are located within the outlined target areas. Damage level sought is 30 percent to buildings.

11. EFFECT ON DRV: Reduction in support capability to southern and central DRVN coastal defense effort.

12. RECUPERABILITY: Lumber is locally available; large sawmill located about 0.3 miles southwest of wharf. Recuperability time is as follows:

a. Damage assessment	1 day
b. Clearing debris and procurement of timber	2 days
c. Repair of wharves including approaches and buildings	<u>4 days</u>
TOTAL:	7 days

13. COLLATERAL DAMAGE: Possible minor to adjacent dwellings.

14. RECOMMENDED WEAPONS AND SORTIES: (Naval Base Area)

a. This is a target complex comprised of two areas. Weapons and sorties have been computed for each area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target is also shown.

(1) In order to achieve a damage level of 30%, weapons/sorties required over target:

Weapon:	250# <u>SNAKEYE</u>	or	250# <u>BOMB</u>	or	500# <u>BOMB</u>	or	750# <u>BOMB</u>
Area A	167/14		214/18		110/12		65/11
Area B	55/5		97/8		39/4		19/3
Totals:	222/19		311/26		149/16		84/14

(2) Weapons/sorties operationally required to achieve "over target" requirement shown above:

271/23	379/32	182/20	102/17
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(3) In order to achieve a damage level of 70%,
weapons/sorties required over target:

1
2

Weapon:	250# <u>SNAKEYE</u>	or	250# <u>BOMB</u>	or	500# <u>BOMB</u>	or	750# <u>BOMB</u>	
Area A	564/47		722/60		371/41		220/37	3
Area B	186/16		327/27		132/15		64/10	4
Totals:	750/63		1049/87		503/56		284/47	5

(4) Weapons/sorties operationally required to achieve
"over target" requirement shown above:

6
7

915/77	1279/106	613/68	346/57	8
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15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%

9

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A-C-DE-4

Tab DE to
Annex C to
Appendix A

(Revised by 7th Note to Holders)

TABLET NO. 71.13



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Tab. III to Annex A
to Appendix A

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 71.13 1
2. BE NUMBER: 617-0774 (E) 2
617-0801 (W) 3
3. IDENTIFICATION: Ham Hong Port Facilities E and W on 4
Song Ma 5
4. DATE OF INFORMATION: 27 April 1965 DATE OF TIS: 1 6
May 1965 7
5. LOCATION: 19-50-03N 106-47-55E (4G 824930) 8
6. DESCRIPTION: Port facilities, located on the east 9
and west banks of the Song Ma at Ham Hong are accessible to 10
craft with drafts to 8 ft. Facilities concentrated on the 11
east bank immediately downstream from the Thanh Hoa RR and 12
Hwy Bridge (JCS Egt #14) include approximately 21 warehouse- 13
type buildings providing about 39,050 sq. ft. of floor space 14
and approximately 6.5 acres of open storage. Landing 15
facilities consist of 3 piers providing approximately 150 16
ft. of wharfage, a crane, several landings, and an estimated 17
1,500 ft. of riverbank suitable for cargo transfer. 18
The east-bank port area is cleared by rail and 19
road to the major transportation nets. Facilities on the 20
west bank handle mainly bulk cargo and consist of three 21
small piers, two of which are equipped with bulk loaders, 22
several landing ramps, a marine railway, and 2 or 3 portable 23
conveyors or loaders. Covered storage is available in 24
approximately 15 warehouse-type buildings providing 25
approximately 37,050 sq. ft. of floor space; 5.5 acres 26
suitable for stacking or bulk storage are available in and 27
around the port area. Riverbank suitable for cargo transfer 28
totals 2,500 ft. in the port area; additional riverbank 29
suitable for cargo transfer is available downstream. A 30
shipyard for small craft equipped with several marine rail- 31
ways and support buildings is located on the west bank 1 1/2 32
NM downstream of the port area. 33
7. SIGNIFICANCE: Port facilities serve the Thanh Hoa 34
area. Situated astride the principal north-south rail and 35
road nets, the port is an important transshipment point for 36
waterway, rail and road nets radiating from the Ham Hong/ 37
Thanh Hoa area. Additionally, ramps and landings integral 38
to the port can serve road and rail ferry operations across 39
the Song Ma when use of the Thanh Hoa bridge is denied. 40
8. TARGET ENVIRONMENT: Target, about 30 ft. above sea 41
level, is about 2 NM NNE of Thanh Hoa. Target is on the 42
flowing Song Ma, 8.5 NM WNW of river's mouth at Gulf of 43
Tonkin. Song Ma traverses flat, rice-cultivated plains and 44
contain widely scattered hills. Small hill, mostly terraced 45
and reaching 300 ft. above the plains, is located 1 NM WNW 46
of target. Discontinuous hills, with peaks up to 1150 ft. 47
above sea level, begin 5.5 NM N of target and extend nor- 48
ward. Road and railroad bridge marks low limit of target; 49
on W side of Song Ma, road and railroad are bordered on N by 50
a grassy hillock. 51

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9. DEFENSE ENVIRONMENT:

a. The overall Thanh Hoa AAA defense comprises 12 sites with 47 positions (31 occupied/2 possibly occupied and 14 unoccupied positions). One unoccupied 4-position site is in the immediate vicinity of the target. (DOI: 19 March, 2, 4, and 5 April 1965)

b. Heavy AW and ground fire would be anticipated since trenching is evident within the target area. Current Order of Battle holds the 269th Independent Infantry Regiment and the 57th Infantry Regiment of the 304th Division in the Thanh Hoa area. In addition, the 486th Coastal Security Battalion is located at nearby Sam Son, approximately 7 NM southeast of Thanh Hoa.

c. Within 5 NM of Thanh Hoa (1948N/10547E) are two EW radars and at My Duc, about 10 NM northeast there is a coastal watch radar.

10. DAMAGE OBJECTIVE: Disruption of port operations through damage to landing facilities, mechanical handling equipment and warehouses.

11. EFFECT ON DRV: The facility is one of the DRV's important inland waterway ports, and its development has been assigned a high priority in DRV waterway development plans. Damage to the facilities would disrupt a waterway-oriented transportation pattern in the area, impede rail and road ferry operations, and hamper transport related to important agriculture and forestry industries concentrated in the area.

12. RECUPERABILITY: Port facilities are relatively unsophisticated, and it is estimated that cargo transfer operations could be restored to 50-60% of their prestrike capacity in 4-5 days, to 80-90% of prestrike capacity in 1-2 weeks. Replacement of damaged or destroyed mechanical handling equipment would prove most difficult, and it is anticipated that manual transfer of bulk cargos would be resorted to, at considerable loss in efficiency; the effect of significant damage to landing facilities would be absorbed largely through increased river bank cargo transfer, again at considerable loss in efficiency. Destruction of covered storage facilities would seriously hinder port operations only temporarily; it is estimated that covered storage equal to that provided by damage buildings could be provided in adjacent urban/industrial buildings. Replacement construction for damaged storage buildings would require an estimated 5-7 days if pursued on a priority basis. Repair of road and rail clearance from the port area would require 2-3 days.

13. COLLATERAL DAMAGE: Insignificant.

14. RECOMMENDED WEAPONS AND SORTIES:

a. This is a large target complex comprised of four areas. Weapons and sorties have been computed for each area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target is also shown.

(1) In order to achieve a damage level of 30%, weapons/sorties required over target:

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Weapon:	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	750# BOMB	
Area A	14/1		41/3		21/2		13/2	1
Area B	17/2		41/3		21/2		13/2	2
Area C	26/2		60/5		31/3		18/3	3
Area D	19/2		41/3		21/2		13/2	4
Totals:	76/7		183/13		94/9		57/9	5

(2) Weapons/sorties operationally required to achieve "over target" requirement shown above: 6
7

93/9 223/16 115/11 70/11 8

(3) In order to achieve a damage level of 70%, weapons/sorties required over target: 9
10

Weapon:	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	750# BOMB	
Area A	48/4		138/12		71/8		44/7	11
Area B	58/5		138/12		71/8		44/7	12
Area C	88/7		202/17		105/12		61/10	13
Area D	64/5		138/12		71/8		44/7	14
Totals:	258/21		616/53		318/36		193/31	15

(4) Weapons/sorties operationally required to achieve "over target" requirement shown above: 16
17

315/26 751/65 388/44 235/38 18

15. PROBABILITY OF ACHIEVING DAMAGE LEVEL: 50% 19

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TAB DO TO ANNEX C TO APPENDIX A

TARGET NO. 72



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(Revised by 11th N/H)

A-C-DO-1

TAB DO TO ANNEX C
TO APPENDIX A

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 72 1
2. BE NUMBER: 615-0149 2
3. IDENTIFICATION: Port Wallut Naval Base 3
4. DATE OF INFORMATION: 12 August 1966 4
DATE OF TIS: 7 September 1966 5
DATE OF PHOTOGRAPHY: 17 March 1965 6
DATE OF INTELLIGENCE REVIEW: 5 April 1965 7
5. LOCATION: 21-11-54N 107-24-19E, UTM YJ 671464, 15.5 NM NE of Cam Pha. 8
9
6. DESCRIPTION: Port Wallut is a natural well-protected harbor on the N side of Ile de Ke Bao. The western half of the cape comprises a barracks and administration area of approximately 15 scattered administration/ barracks/support buildings with an approximate total of 16,855 sq. ft. gross floor area. There are several automatic weapons (AW) positions in the area. Located on the western shore is a small "L" head pier. Major naval facilities located on the quay area on the N and NE shores of the cape, adjacent to the bay, include 1 stone wharf 200 feet long, 1 crane, 2 pontoon piers (60x20 feet each with 5 foot wide approaches, and depths alongside estimated at 16 feet). There is also a small floating drydock 75 to 80 feet in length, which can be used for minor repairs on PT's. Located on the NE shore are 2 small finger piers to provide dispersed berthing for PT patrol craft based at Port Wallut. 300 yards off the NE coast is a small island which contains 2 storage/support buildings and 1 barracks building. One building has been vacated and one dismantled. The quay area on the N shore of the bay comprises a warehouse and storage area of 27 buildings containing 33,350 sq. ft. Also within this area there are underground storage facilities of undetermined size, a ramp, and a POL tank. The administration/barracks/storage/support facilities located on the S shore of the bay, connected to the quay area by a causeway/bridge, include 10 buildings containing 48,603 sq. ft. Normally 2 PGM's and 3 P-4's are based at Port Wallut. 10
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7. SIGNIFICANCE: Northernmost of NVN naval bases; has support facilities for coastal patrol craft. 32
33
8. TARGET ENVIRONMENT: The Port Wallut Naval Base is located in a small bay on the NE side of Ile de Ke Bao, 15.5 NM NE of Cam Pha the closest alternate port, and 54 NM NE of Hai Phong. No alternate landing facilities in the immediate vicinity of Port Wallut. East of Port Wallut the island rises steeply to a 1,300 foot ridge trending NE-SW. The ridge slopes are heavily wooded. 34
35
36
37
38
39
9. DEFENSE ENVIRONMENT: 40
- a. No SAM sites have been identified within a 30 NM radius of this target. 41
42
- b. Identified AAA defense activity in the Van Hoa area includes 2 active sites (6 occupied 37mm revetments) and 2 inactive sites. (DOI: 10 May - 28 July 1965) 43
44
45

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c. Intense machine gun/small arms fire from naval base personnel would be encountered. Latest naval OB carries 3 P-4 torpedo boats at this base which could mount two twin 12.7mm HMG's each.

10. DAMAGE OBJECTIVE: Reduce the naval base capability of supporting and repairing the "P-4" class motor torpedo boats. Damage criterion is structural damage to supply/support buildings, repair facilities, with accompanying damage to motor torpedo boats undergoing repairs at the naval facilities within the target area. Damage level is 30 per cent.

11. EFFECT ON NVN: Reduction in capability for support, repair, and berthing of coastal defense patrol craft, principally the P-4 type.

12. RECUPERABILITY: Lumber available at Hai Phong. Recuperability time as follows:

a. Damage assessment:	1 day
b. Clearing debris and procurement of lumber:	3 days
c. Repair of wharves including approaches and buildings:	<u>1 day</u>
TOTAL:	5 days

13. COLLATERAL DAMAGE:

a. Insignificant

b.	Population				Casualties*			
	Target Area		Adjacent Area		Target Area		Adjacent Area	
	Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ
	250	0	100	150	15	0	1	2

*Casualties estimated under daylight alert conditions.

14. RECOMMENDED WEAPONS AND SORTIES:

This installation is comprised of nine areas. Three areas have been delineated for weapons application. Weapons and sorties have been computed for each area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target area are also shown:

(1) In order to achieve a damage level of 30%, weapons/sorties required over target:

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WEAPON	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	750# BOMB	
Area B (200x1400)	64/5		125/10		64/7		38/6	1
Area E (200x300)	21/2		43/4		22/2		13/2	2
Area H (200x800)	39/3		78/7		40/4		24/4	3
Totals	124/10		246/21		126/13		75/12	4

(2) Weapons/sorties operationally required to achieve "over target" requirements shown above: 5
6

151/13 300/25 154/18 91/16 7

(3) In order to achieve a damage level of 70%, weapons/sorties required over target: 8
9

WEAPON	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	750# BOMB	
Area B	216/18		422/35		216/24		128/21	10
Area E	71/6		145/12		74/8		44/7	11
Area H	132/11		263/22		135/15		81/14	12
Totals	419/35		830/69		425/47		253/42	13

(4) Weapons/sorties operationally required to achieve "over target" requirements shown above: 14
15

511/43 1012/85 518/58 309/52 16

15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50% 17

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A-C-DO-4

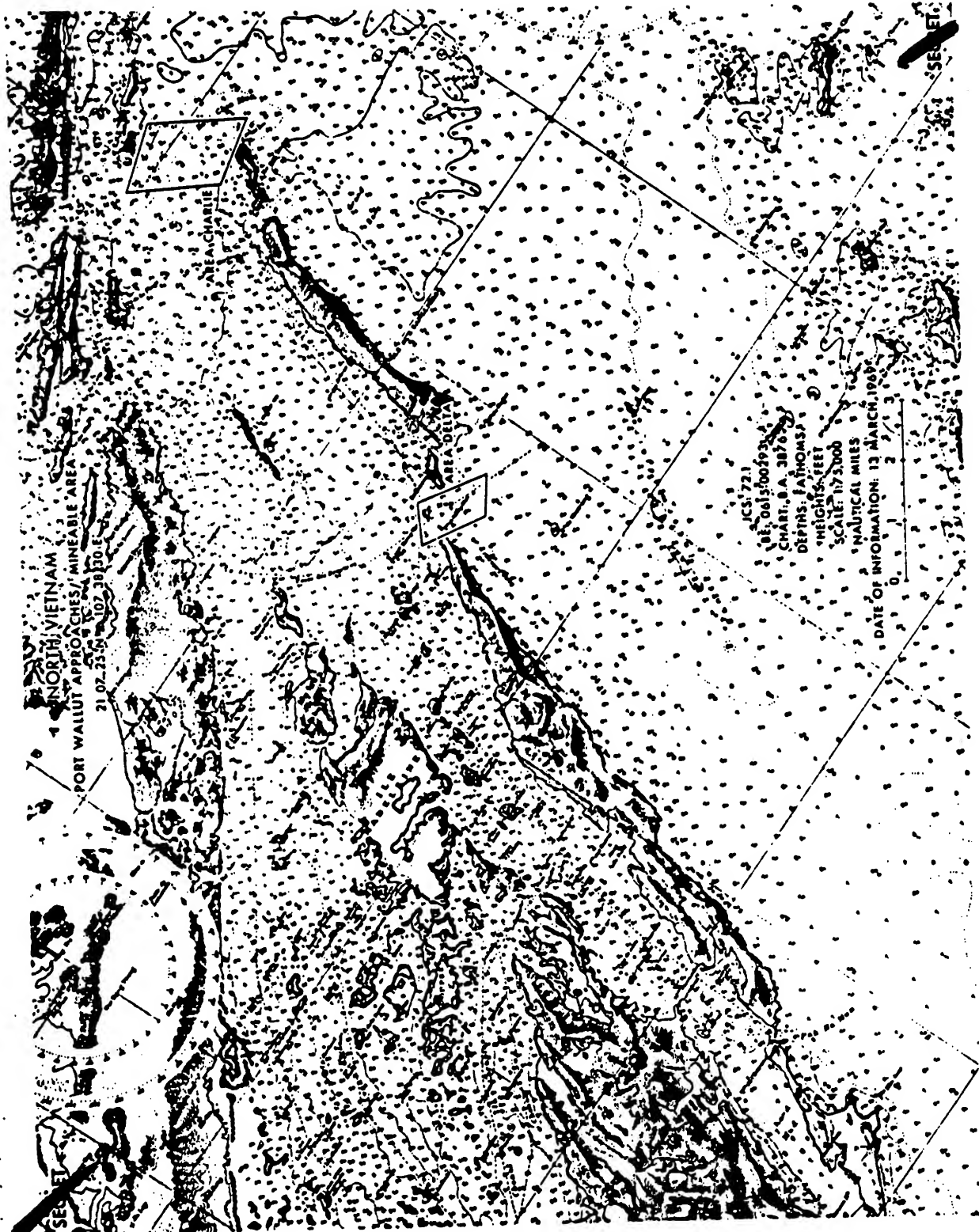
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TAB DOa TO ANNEX C TO APPENDIX A

TARGET NO. 72.1



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(Revised by 17th N/H)

A-C-DOa-1

Tab DOa to Annex C
to Appendix A

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 72.1 1
2. BE NUMBER: 615-0293 2
3. IDENTIFICATION: Van Hoa Approaches/Mineable Area Port Wallut 3
4. DATE OF INFORMATION: 12 March 1969 4
DATE OF TISD: 8 May 1969 5
DATE OF PHOTOGRAPHY: Not applicable 6
DATE OF INTELLIGENCE REVIEW: 13 March 1969 7
5. LOCATION: 21-07-25N 107-38-30E (Approximate center of Area DELTA), 5 NM SE of port Wallut Naval Base. 8
9
6. DESCRIPTION: The two primary mining areas which control deepwater access to Van Hoa have been delineated. 10
11
 - a. Area CHARLIE, 21-15N 107-41E (1.2 x 1.8 NM), extends across KuaI Chin Mun Channel, controlling the northeast approach. Depths vary from 12' to 65'. 12
13
 - b. Area DELTA, 21-07N 107-38E (0.8 x 1.1 NM), lies at the northern tip of Ile Ba Mun, in the Tsieng Mun Channel. Depths vary from 30' to 66'. 14
15
 - c. Tidal rises: 3.8' at MLLW, 10.6' at MHHW. Tidal currents attain 1.5 kts. velocity. 16
17
7. SIGNIFICANCE: These mineable areas control access to the Port Wallut Naval Base (BE 615-0149), the northernmost naval support facility in NVN. 18
19
20
8. INSTALLATION ENVIRONMENT: Area CHARLIE, 7.3 NM NE of Port Wallut, extends NW from N end of Ile Des Singes (300' elev.) for 1.7 NM, to a small island 140' high. Ile Aux Sangliers, (max. elev. 750') is about 2.0 NM S of area; Liong Tai Loung Isl. (530' elev.) is 2.0 NM NW of area. Area DELTA, 6 NM SE of Port Wallut, is oriented NW-SE between the long narrow islands Ile Ba Mun (1,000' elev.) and Ile Aux Sangliers: N tip of Ile Ba Mun touches SW edge of area, and Ile Baunce, a very small island 280' high, at S end of Ile Aux Sangliers, touches NE edge. Ile Aux Bambous (660' elev.) is 3.5 NM W of area; Ile Madeline (920' elev.) is 3.5 NM SW of area. 21
22
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9. DEFENSE ENVIRONMENT: 31
 - a. The target is not within the SAM envelope. 32
 - b. AAA activity has been identified within 3 NM of the target. 33
 - c. HMG and small arms fire is not anticipated. 34

~~SECRET~~ NO FOREIGN DISSEM EXCLUDED FROM AUTOMATIC DOWNGRADING

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10. DAMAGE OBJECTIVE: Interdict NVN Naval craft and restrict access to the naval base. 1
2
11. EFFECT ON NVN: Reduction in capability for support, repair, and berthing of coastal defense patrol craft. 3
4
12. RECUPERABILITY: At present the NVN has only a very limited minesweep capability. 5
13. COLLATERAL DAMAGE: Possible damage to fishing craft transiting the area. 6
7
14. RECOMMENDED WEAPONS AND SORTIES (MINEABLE AREA): 8
- | | Over Target | | | |
|----------------------------------------------------------------------------------------------------------------------|----------------|----------------|---------------------|----------|
| <u>Field</u> | <u>MK 52-2</u> | <u>MK 36-2</u> | <u>A-1H Sorties</u> | |
| Area C | 37 | 82 | 40 | 11 |
| Area D | 20 | 43 | 21 | 12 |
| | | Launch | | 13 |
| Area C | 44 | 98 | 48 | 14 |
| Area D | 24 | 51 | 25 | 15 |
| 15. <u>PROBABILITY OF MODERATE DAMAGE TO A SINGLE SHIP TRANSITING THE MINEFIELD AREA (ALL FIELDS COMBINED)</u> : 30% | | | | 16
17 |

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A-C-DOa-3
(Revised by 17th Note to Holders)

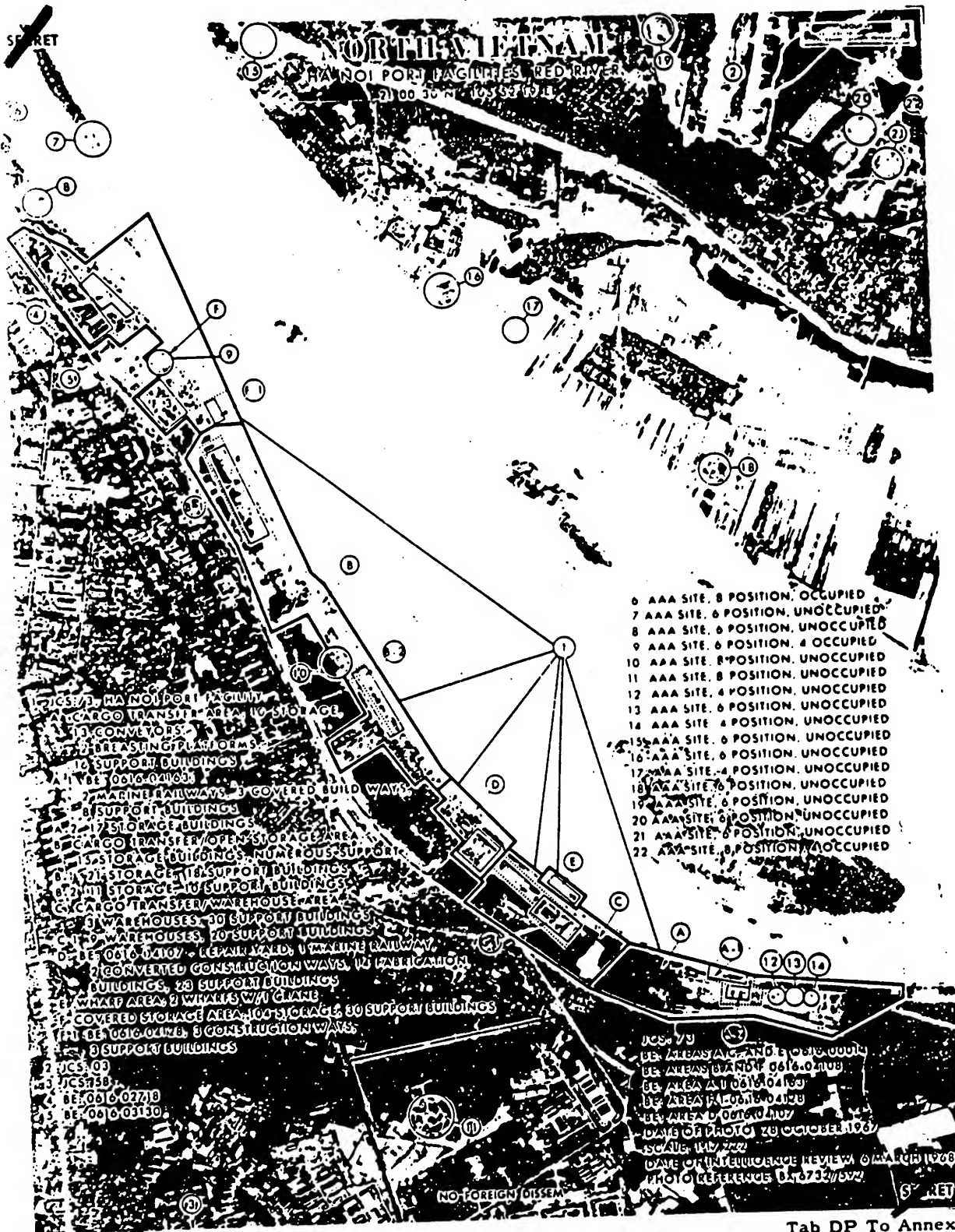
Tab DOa to
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TAB DP TO ANNEX C TO APPENDX A

TARGET NO. 73



~~SECRET~~

(Revised by 14th N/H)

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Tab DP To Annex C
To Appendix A

~~SECRET~~

TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 73 1
2. BE NUMBER: 616-00014 (areas A, C, and E) 2
616-04108 (areas B and F) 3
616-04163 (area A-1) 4
616-04128 (area F-1) 5
616-04107 (area D) 6
3. IDENTIFICATION: Ha Noi Port Facilities Red River. 7
4. DATE OF INFORMATION: 18 December 1967. 8
DATE OF TIS: 22 March 1968 9
DATE OF PHOTOGRAPHY: 28 October 1967 10
DATE OF INTELLIGENCE REVIEW: 6 March 1968 11
5. LOCATION: 21-00-30N/105-52-19E (this is a reference point for the entire 12
port complex). 13
6. DESCRIPTION: Ha Noi Port is an inland waterway port accessible to craft 14
with drafts not exceeding 9 feet. The entire port complex includes 2 cargo handling 15
facilities having a combined estimated capability of 8,800 STPD, and 3 craft con- 16
struction/repair yards. The northern cargo handling facility (B+F) consists of 119 17
warehouse-type buildings, 7,800 feet of riverbank suitable for cargo transfer at 18
high water, and includes Ha Noi Barge Yard #2 (F-1) which consists of 3 support 19
buildings, and 3 open construction ways. The southern cargo handling facility 20
(A, C, and E) consists of one 140-foot general cargo wharf, one 100-foot general 21
cargo wharf, two 40-foot breasting platforms, 39 warehouse-type buildings, ap- 22
proximately 11 acres of open storage used mainly for coal and limestone storage, 23
and is fronted by about 6,400 feet of riverbank suitable for cargo transfer. Mech- 24
anical handling devices include a crane (3-5 ton estimated capacity) on the 140- 25
foot general cargo wharf and 13 portable conveyors for bulk handling of coal and 26
limestone. This facility includes Ha Noi Boat Yard Vinh Thuy (A-1) which con- 27
sists of 8 support buildings, 2 marine railways, and 3 covered building ways. 28
Ha Noi Barge Yard (D) is located between the northern and southern cargo handling 29
facilities and consists of 14 fabrication buildings, 23 support buildings, 2 covered 30
construction ways, and 1 marine railway. The port complex is cleared by road to 31
the major highway and rail net and by the Red River to the rest of the major water- 32
way system. The port area is not directly served by rail. 33
7. SIGNIFICANCE: Ha Noi Port handles an estimated 30% of NVN inland 34
waterway traffic. It is an important commercial transshipment and distribution 35
center and handles some shipments for support of PL/VC operations. Craft 36
construction facilities in the target area account for 15% of the total NVN barge 37
building capability. 38
8. TARGET ENVIRONMENT: The port facilities constitute a linear, dog- 39
legged complex approximately 3NM long ranging from about 150 feet to nearly 40
1,350 feet in width. Significant facilities concentrated in northern and southern 41
sections are connected by unimproved riverbank. 42

A-C-DP-2
(REVISED BY 14TH NOTE TO HOLDERS)

Tab Dp to
Annex C to
Appendix A

~~SECRET~~ NO FOREIGN DISSEM EXCLUDED FROM AUTOMATIC DOWNGRADING

~~SECRET~~

9. DEFENSE ENVIRONMENT:

- a. The target is within the SAM envelope. 1
- b. AAA activity has been identified within 3 NM of the target. 2
- c. HMG and small arms fire is anticipated. 3

10. DAMAGE OBJECTIVE: Reduce port's over-all capability by attack on facilities in the port area. Damage criterion is structural damage to wharves, warehouses, marine railways, and craft construction shops in the port area. Damage level is 30 percent. 4
5
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7

11. EFFECT ON NVN: Reduced flow of cargo to and from the capital and major transport center of the country and a reduced craft building capability will cause shortages in materials which support the general economy and a reduction in the capability to provide military support to the PL/VC. 8
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11

12. RECUPERABILITY: Port facilities at Ha Noi, although extensive in area, are relatively unsophisticated. It is estimated that cargo transfer operations could be restored to 90% of pre-strike efficiency within 4-5 days, although covered storage would not be readily available for a period of 10-30 days. Craft construction facilities could be restored to 90% of their pre-strike efficiency within 10-30 days. 12
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13. COLLATERAL DAMAGE:

- a. Moderate damage to surrounding area. 17

Population				Casualties*				
Target Area		Adjacent Area		Target Area		Adjacent Area		
Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ	
0	3500	0	8000	0	210	0	80	21

*Casualties estimated under daylight alert conditions. 22

14. RECOMMENDED WEAPONS AND SORTIES:

This target is comprised of six areas. Ten sub-areas have been delineated for weapons application. Weapons and sorties have been computed for each sub-area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target are also shown: 23
24
25
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(1) In order to achieve a damage level of 30%, weapons/sorties required over target: 28

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A-C-DP-3
(REVISED BY 14TH NOTE TO HOLDERS)

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Appendix A

Weapon:	500# Snakeye or	750# Bomb	
Area A-1 (150 x 500)	12/1	16/3	1
Area A-2 (150 x 300)	9/1	13/2	2
Area B-1 (250 x 1250)	35/4	36/6	3
Area B-2 (200 x 900)	22/2	26/4	4
Area C-1 (300 x 600)	23/3	21/4	5
Area D (400 x 400)	22/2	19/3	6
Area E (150 x 400)	20/2	75/12	7
Area F-1 (150 x 300)	9/1	13/2	8
Area F-2 (350 x 1550)	57/6	49/8	9
Area F-3 (350 x 550)	24/3	21/4	10
Totals:	233/25	289/48	11

(2) Weapons/Sorties operationally required to achieve "over target" requirements shown above:

Totals:	280/31	347/58	14
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(3) In order to achieve a damage level of 70%, weapons/sorties required over target:

Weapon:	500# Snakeye or	750# Bomb	
Area A-1	41/5	54/9	17
Area A-2	30/3	44/7	18
Area B-1	118/13	122/20	19
Area B-2	74/8	88/15	20
Area C-1	78/9	71/12	21
Area D	74/8	64/11	22
Area E	38/4	175/29	23
Area F-1	30/3	47/8	24
Area F-2	193/21	166/28	25
Area F-3	81/9	71/12	26
Totals:	757/83	902/151	27

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A-C-DP-4
(REVISED BY 14TH NOTE TO HOLDERS)

Tab DP to
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Appendix A

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(4) Weapons/Sorties operationally required to achieve "over target" requirements shown above:

Totals: 909/101 1082/180

15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%

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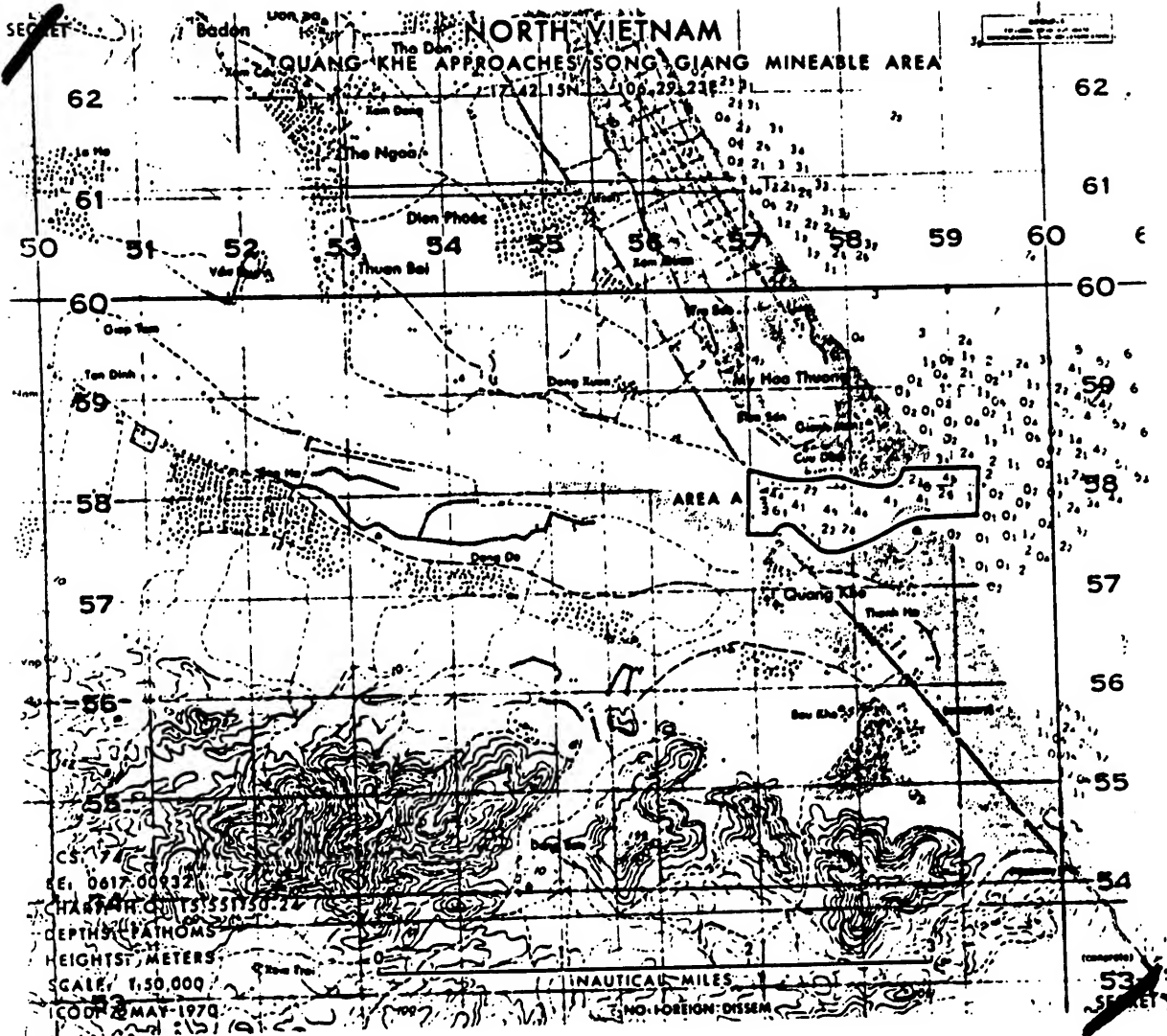
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A-C-DP-5
(ADDED BY 14TH NOTE TO HOLDERS)

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Appendix A

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TAB DQ TO ANNEX C TO APPENDIX A
TARBIET NO. 14



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A-3-DQ-1

Tab DQ to Annex C
to Appendix A

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 74 1
2. BE NUMBER: 617-0932 2
3. IDENTIFICATION: Quang Khe Approaches/Song Giang Mineable Area 3
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4. DATE OF INFORMATION: 22 February 1971 5
DATE OF TISD: 23 February 1971 6
DATE OF PHOTOGRAPHY: Not Applicable 7
DATE OF INTELLIGENCE REVIEW: 22 February 1971 8
5. LOCATION: 17-42-15N 106-29-23E, 17 NM NW (31.5 km) of Dong Hoi. 9
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6. DESCRIPTION: One individual area that controls access to the Quang Khe Coastal Transshipment Point has been selected. 11
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 - a. AREA ALPHA is located at the river mouth, with a 500 yd (460 m) extension into the Gulf of Tonkin; 1 NM (1.85 km) long, .25 km (463 m) wide; central depths to 39' (12 m) at E edge, 25' (7.6 m) thru center and 9' (2.7 m) at W edge; bottom is mud. 13
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 - b. Tidal information: MHHW 4.3' (1.31 m), MLHW 3.4' (1.04 m) MLLW 3.3' (1.01 m), MLLW 1.6' (0.49m). 17
18
 - c. The Song Giang at Quang Khe Coastal Transshipment Point is about .33 NM (617 m) wide with central depths of 20' to 30' (6 to 9 m) for at least 1 NM (1.85 km) in from the river mouth. The river is fronted by a bar that extends in a semicircle about 1 NM (1.85 km) into the Gulf of Tonkin. Depths over the bar shoal to less than a fathom about .75 NM (1.4 km) offshore with the 2-fathom curve only about .25 NM (463 m) beyond. 19
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7. SIGNIFICANCE: This mineable area controls access to Quang Khe Coastal Transshipment Point (BE 617-1044) with its associated port facilities. The military port capacity is estimated at 250 (254 mt) long tons per 20 hour working day. Additional tonnage is offloaded across the beach and transits the area on inland waterway vessels. 26
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8. TARGET ENVIRONMENT: Target, near sea level, extends about 1 NM (1.85 km) upstream from river mouth. Stream, flowing ESE across flat plains cultivated in wetland rice, is bounded by very low banks. Narrow marshes 300' to 1,500' (90 m to 460 m) wide border each side of river; marshes bounded by levees roughly parallel to river. 1.5 NM (2.85 km) SSW of river, plains about steep, wooded, ESE-WNW trending hills; hilltops are as high as 750' (228 m) above sea level. Wooded, low hills 6.0 NM (11.1 km) upstream from center of target increase in elevation inland. There is no alternate approach to the transshipment point and no other facilities outside the river to accommodate patrol craft. 31
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A-C-DQ-2
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Tab DQ to
Annex C to
Appendix A

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9. DEFENSE ENVIRONMENT:

- a. The target is within the SAM envelope.
- b. AAA activity has been identified within 3 NM of the target.
- c. HMG and small arms fire is anticipated.

10. DAMAGE OBJECTIVE: Interdict NVN naval craft and coastal vessels traversing the Cua Giang; deny use of Quang Khe Transshipment Point and port facilities.

11. EFFECT ON NVN: Deterioration of naval support capability to southern fleet area and deterioration of NVN coastal shipping capability.

12. RECUPERABILITY: At present the NVN has only very limited mine-sweep capability.

13. COLLATERAL DAMAGE: Possible damage to fishing craft transiting area.

14. RECOMMENDED WEAPONS (MINEABLE AREA):

MK 36-2

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MK-50

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15. PROBABILITY OF MODERATE DAMAGE TO A SINGLE SHIP TRANSITING THE MINEFIELD AREA (ALL FIELDS COMBINED): 30%

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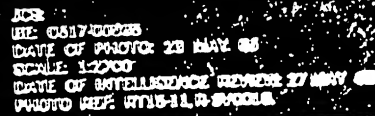
A-C-DQ-3
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Tab DQ to
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Appendix A

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TARGET NO. 74.1

474. m. p. 106-107°



A-C-DR-1

Tab DR to Annex C
to Appendix A

~~TOP SECRET~~

TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 1
2. BE NUMBER: 617-0585 2
3. IDENTIFICATION: Quang Khe Naval Base Cuu Dinh 3
4. DATE OF INFORMATION: 23 May 1965 DATE OF TIS: 4
1965 5
5. LOCATION: 17-42-25N 106-28-55E, UTM XE 575580 6
6. DESCRIPTION: The Quang Khe Naval Base Cuu Dinh is 7
located just inside the mouth of the Song Qiang. Most of the 8
base facilities are located on the north side of the river, 9
while those on the south side are predominately warehouses, 10
most of which are probably used for commercial storage. 11
There is an administrative area, a machine shop and quarters 12
on the north side of the river. Also a T-head pier 250 feet 13
long, with an approach 250 feet long, and on the shore west 14
of the pier, an end-haul marine railway with transversing 15
tracks (to drydock about 6 patrol craft). Just north of 16
the railway is the revetted ammunition storage buildings. 17
Ten POL storage tanks are partially buried in the sand, 18
300 yards N of the pier. The capacity is approximately 300 19
to 500 metric tons. Two other tanks and many fuel drums are 20
on the beach to the E of the road running N through the area. 21
The river at Quang Khe is about 1/3 nm wide with central 22
depths of 30 to 40 feet for at least one nm in from the river 23
mouth. The mouth of the river is fronted by a bar for about 24
1/2 nm; depths over the bar are generally about 6 feet with 25
a fairly narrow channel having a depth of 12 feet at MHHW 26
running through the center of the bar. (DOI: 20 April 1966.) 27
7. SIGNIFICANCE: It is the southernmost naval base in DRV 30
providing support to patrol craft. The base is located near 31
the river mouth, giving the craft quick access to the Gulf of 32
Tonkin. 33
8. TARGET ENVIRONMENT: Ha Don Naval Facility (17-43N/ 34
106-26E) (UTM XE 525600), located about 4 miles upriver, has 35
a small T-head pier, 2 barracks, 2 probable storage buildings, 36
and an administrative building. While it is not considered 37
to be an active naval facility, patrol craft have been berthing 38
at the pier recently, possibly to avoid concentration of forces 39
at Quang Khe. Port facilities on the south side of the river 40
includes a T-head pier with a berthing length of 100 feet, 41
two finger piers used for breasting coasters about 180 feet 42
long across heads of both piers. 43
9. DEFENSE ENVIRONMENT: 44
 - a. AAA defenses in the Quang Khe - Cuu Dinh area included 45
an active 8-gun 57mm or 85mm site as of 24 March 1965. 46
There are 8 inactive sites, amounting to 34 unoccupied 47
positions, in the general vicinity. (Photo ref: Quang 48
Khe - 24 Mar 65; Cuu Dinh - 13 Feb and 24 Mar 65; Thanh 49
Ha (dismantled) - 5 Jan 65; Thuan Bai (active) - 24 Mar 65). 50

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A-C-DR-2

Tab DR to
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Appendix A

(Revised by 7th Note to Holders)

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b. In addition to barracks associated with the target, Quang Khe Barracks are located at 174153N/1062930E (UTM 582573) and have an estimated capability for accommodating 500 military (ground force security) personnel. A revetted 5-gun coastal defense site is located 1.8 nm southeast of the Quang Khe Barracks.

c. An SO-type surface search radar has been identified at 174222N/1062939E. Early warning is best provided by KNIPEREST B and SCR-270 radars at Dong Hoi, approximately 13 nm southeast.

10. DAMAGE OBJECTIVE: Reduce the naval base capability of supporting and repairing "Swatow" class motor gunboats and patrol/torpedo boats. Damage criterion is structural damage to buildings and facilities contributing to storage, support, and repair capabilities and moderate damage to boats undergoing repairs at the marine railway facility. Damage level sought is 30 percent.

11. EFFECT ON DRV: Reduction of the naval defense capability in the southern part of DRV.

12. RECUPERABILITY: Lumber is available no farther away than Ben Thuy. Recuperability time is as follows:

a. Damage assessment:	2 days
b. Clearing debris and procurement of timber:	2 days
c. Repair of pier and buildings:	<u>3 days</u>
Total	7 days

13. COLLATERAL DAMAGE: Insignificant.

14. RECOMMENDED WEAPONS AND SORTIES:

a. This is a large target complex comprised of five areas. Weapons and sorties have been computed for each area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target is also shown.

(1) In order to achieve a damage level of 30%, weapons/sorties required over target:

Weapon:	<u>250#</u> <u>SNAKEYE</u>	or	<u>250#</u> <u>BOMB</u>	or	<u>500#</u> <u>BOMB</u>	or	<u>750#</u> <u>BOMB</u>
Area A	18/2		25/2		22/2		21/4
Area B	26/2		60/5		31/3		18/3
Area C	112/10		408/34		408/45		408/68
Area D	112/10		338/28		338/38		338/56
Area E	12/1		45/4		32/4		30/5
Totals:	280/25		876/73		831/92		815/136

(2) Weapons/sorties operationally required to achieve "over target" requirement shown above:

342/30	1070/89	1010/112	994/166
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A-C-DR-3

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Annex C to
Appendix A

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(3) In order to achieve a damage level of 70%,
weapons/sorties required over target:

Weapon:	250# <u>SNAKEYE</u>	or	250# <u>BOMB</u>	or	500# <u>BOMB</u>	or	750# <u>BOMB</u>	
Area A	61/5		85/7		75/8		71/12	3
Area B	88/7		202/17		105/12		61/10	4
Area C	376/32		1375/114		1375/158		1375/228	5
Area D	378/32		1140/95		1140/127		1140/190	6
Area E	41/3		152/13		103/12		102/17	7
Totals:	944/79		2954/246		2803/314		2749/459	8

(4) Weapons/sorties operationally required to achieve
"over target" requirement shown above:

1150/96	3600/300	3460/384	3460/560	11
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15. PROBABILITY OF ACHIEVING DAMAGE CRITERION: 50%

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A-C-DR-4

Tab DR to
Annex C to
Appendix A

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ANNEX D TO APPENDIX A

CATEGORY D

INDUSTRIAL INSTALLATIONS

~~TOP SECRET~~

A-D-1

Annex D to
Appendix A

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TAB A TO ANNEX D TO APPENDIX A

TARGET NO. 7



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(Revised by 14th N/H)

A-D-A-1

Tab A To Annex D
To Appendix A

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 75 1
2. BE NUMBER: 616-0198 2
3. IDENTIFICATION: Viet Tri Chemical Plant 3
4. DATE OF INFORMATION: 3 April 1968 4
DATE OF TIS: 24 April 1968 5
DATE OF PHOTOGRAPHY: 18 October 1967 6
DATE OF INTELLIGENCE REVIEW: 12 March 1968 7
5. LOCATION: 21-17-55N 105-25-12E 8
6. DESCRIPTION: The plant occupies a 400' x 600' site on 9
the western side of the Viet Tri industrial complex. It is made 10
up of a polyvinyl chloride building, five miscellaneous shop 11
buildings, an insecticide building, an electrolytic building, 12
a brine-mixing area with chemical tanks, a storage/support area, 13
three warehouses, and seven miscellaneous shop/support buildings. 14
The installation is water, road, and rail served. 15
7. SIGNIFICANCE: This plant, though relatively small, is 16
North Vietnam's only producer of chlorine. It was constructed 17
in 1961 with Communist Chinese aid as an integral part of the 18
Viet Tri industrial complex. Chief products are: chlorine, 19
with a capacity of 3,200 metric tons annually; caustic soda, 20
which it supplies to an adjacent paper mill; polyvinyl chloride, 21
which it supplies to a nearby nylon plant; hydrochloric acid; 22
ferric chloride, and insecticides. This plant is probably the 23
nation's major supplier of water-purifying chemicals and insecticides. 24
The capacity of this plant is estimated to be 100 percent of 25
the national capacity for chemicals. 26
8. TARGET ENVIRONMENT: Target, about 40 ft. above sea 27
level, is 1.1 NM W of Viet Tri. Target is on N bank of Red River, 28
1.3 NM NE of the juncture of the Red River and the S-flowing 29
Riviere Claire and 4.5 NM NE of the junction of the Red and 30
Black Rivers. At the target, the Red River is about 1,000 31
ft. wide, and is bordered on the S by a sand area 0.5 NM wide. 32
Target is on rice cultivated plains; beginning 1.0 NM NW of 33
target and extending N and NW, the generally flat plains con- 34
tain many terraced hillocks and many irregularly-shaped lakes. 35
A road and railroad, aligned WNW-ESE, borders the target on the 36
north. 37
9. DEFENSE ENVIRONMENT: 38
 - a. The target is within the SAM envelope. 39
 - b. AAA activity has been identified within 3 NM 40
of the target. 41
 - c. HMQ and SA fire is anticipated. 42
10. DAMAGE OBJECTIVE: Thirty percent structural damage 43
to electrolytic cell building, brine mixing building, and 44
polyvinyl chloride building. 45

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A-D-A-2
(REVISED BY 14TH NOTE TO HOLDERS)

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Appendix A

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11. EFFECT ON NVN: No direct effect on war-making potential. Disruption of production of chemicals would curtail production of nylon and paper at nearby plants and would reduce water purification in North Vietnam. Loss of insecticides would have a slight effect on food production.

12. RECUPERABILITY: Restoration to pre-attack production would require many months, as NVN is not known to manufacture any of the major components. Replacement of even minor portions of the equipment would necessitate either imports or manufacture at the Ha Noi Machine Tool Plant, and use of skilled labor from Communist China. Installation, testing, and adjustments of new processing units could take as long as a year.

13. COLLATERAL DAMAGE:

a. Light damage to surrounding area.

Population				Casualties*			
Target Area		Adjacent Area		Target Area		Adjacent Area	
Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ
0	1120	0	1700	0	67	0	17

* Casualties estimated under daylight alert conditions.

14. RECOMMENDED WEAPONS AND SORTIES:

This target is contained in a single area, sub-divided into 5 sub-areas. Weapons and sorties have been computed for this area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target are also shown:

(1) In order to achieve a damage level of 30%, weapons/sorties required over target:

WEAPON	500# SNAKEYE	750# BOMB
Area A (300 x 750)	108/12	109/18

(2) Weapons/sorties operationally required to achieve "over target" requirement shown above:

130/14 131/22

(3) In order to achieve a damage level of 70%, weapons/sorties required over target:

364/40 368/61

(4) Weapons/sorties operationally required to achieve "over target" requirement shown above:

436/47 440/73

15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%

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A-D-A-3
(REVISED BY 14TH NOTE TO HOLDERS)

Tab. A to
Annex D to
Appendix

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~~TOP SECRET~~

(2) Weapons/sorties operationally required to achieve
"over target" requirement shown above:

194/22 133/23 118/40 46/46

(3) In order to achieve a damage level of 70%, weapons/
sorties required over target:

WEAPON	500# BOMB	or	750# BOMB	or	1000# BOMB	or	2000# BOMB
Area A	536/60		367/62		327/109		128/128

(4) Weapons/sorties operationally required to achieve
"over target" requirement shown above:

654/73 448/75 399/133 156/156

15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%

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A-D-A-4

Tab A to
Annex D to
Appendix A

(Added by 10th Note to Holders)

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TAB B TO ANNEX D TO APPENDIX A
TARGET NO. 76



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Classified by 17th N/H)

A-D-B-1

Tab B to Annex D
to Appendix A

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 76
2. BE NUMBER: 616-C214
3. IDENTIFICATION: Thai Nguyen Iron and Steel Combine
4. DATE OF INFORMATION: 5 August 1968
DATE OF TISD: 29 January 1969
DATE OF PHOTOGRAPHY: 3 March 1966
DATE OF INTELLIGENCE REVIEW: 5 December 1968
5. LOCATION: 21-33-30N 105-52-08E, located 2.5 NM SE of Thai Nguyen.
6. DESCRIPTION: The dimensions of this installation are about 11,500' by 4,000'. The major areas and buildings are: a large warehouse and open storage area, a coal/ore/limestone storage area, a second smaller warehouse area, coke ovens, a coke by-products plant, a sintering plant, 3 blast furnaces, a thermal power plant, an open-hearth furnace building, rolling mill u/c, an area including a foundry, forges, and machine shops, an administrative area, a small locomotive and railroad car repair shop, a metal fabrication plant, a probable firebrick plant, and water support facilities which include a prominent water aeration reservoir, a water tank and a water pumping station on the river bank. The Thai Nguyen RR Station Yards and Shop (JCS Target #21.11) is adjacent to the warehouse and open storage area on the western edge of this complex, and the Thai Nguyen Ammo Depot (BE No. 616-0305) is just SSE of this facility.
7. SIGNIFICANCE: This combine is the first large iron and steel plant to be built in NVN. Construction probably started in 1960, and it is being built with Chinese Communist technical assistance. It has a design capacity of 300,000 metric tons (M.T.) of pig iron, and 100,000 M.T. of crude steel annually. According to NVN government estimates, the plant, when completed, will satisfy about 75% of domestic iron and steel requirements. The 3 blast furnaces for the production of pig iron are complete. It is estimated that pig iron production is at the rate of about 60,000 M.T. per year, or about 10% of design capacity. In 1965 some 47.5 thousand M.T. were exported, and in 1966 about 40 thousand M.T. were exported. The open hearth furnace building for the production of crude steel appears to be complete, but there are no signs of activity. The mill for the rolling of steel is still under construction, and appears to be about 25% complete. The plant is not currently capable of making steel, hence any fabrication of steel products would have to depend on imported steel. The several foundry-forge-machine shops are capable of casting, cutting, and shaping metal.

~~SECRET~~ NO FOREIGN DISSEM EXCLUDED FROM AUTOMATIC DOWNGRADING

A-D-B-2

(Revised by 17th Note to Holders)

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Annex D to
Appendix A

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8. TARGET ENVIRONMENT: The combine, 100' above sea level, is on rolling, cultivated plains bounded by wooded hills 3.7 NM NE, 5.4 NM SW, and about 5.5 NM NW. Rolling plains contain many closely-spaced hillocks, generally less than 60' higher than adjacent valley bottoms. Flat, cultivated floodplains of the SE-flowing Song Cau extend SE of the target for more than 10 NM. Railroad and highway border the target on the SW; the Song Cau flows near the NE margin.

9. DEFENSE ENVIRONMENT:

- a. The target is within the SAM envelope.
- b. AAA activity has been identified within 3 NM of the target.
- c. HMG and small arms fire is anticipated.

10. DAMAGE OBJECTIVE: Thirty per cent structural damage to coke ovens, blast furnaces, open hearth furnace, thermal power plant, foundry and machine shops, and locomotive repair facilities.

11. EFFECT ON NVN: Little direct effect on war-making potential, but would be a psychological blow to national prestige and desire for selfsufficiency. Economic growth would be retarded.

12. RECUOPERABILITY: The combine has been under construction with Communist Chinese aid since 1960, and is only partly operational. It would require from 18 to 24 months to recover from proposed damage levels.

13. COLLATERAL DAMAGE:

a. Insignificant

Population				Casualties*			
Target Area		Adjacent Area		Target Area		Adjacent Area	
Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ
0	110	0	750	0	7	0	8

*Casualties estimated under daylight alert conditions.

14. RECOMMENDED WEAPONS AND SORTIES:

This large combine is comprised of 8 areas. Two areas (with 6 sub-areas) have been delineated for weapons application. Weapons and sorties have been computed for each area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target are also shown:

(1) In order to achieve a damage level of 30%, weapons/sorties required over target:

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A-D-B-3

(Revised by 17th Note to Holders)

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Annex D to
Appendix A

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WEAPON	250# SNAKEYE	500# SNAKEYE	500# BOMB	750# BOMB	
Area E-1 (375'x70')	2/1	2/1	7/1	7/1	1
Area E-2 (600'x65')	7/1	7/1	9/1	9/1	2
Area E-3 (200'x240)	12/7	32/4	63/7	29/5	3
Area F-4 (105'x155) (Computed for damage level 70% only-see below)					4
Area F-1 (225'x230)	105/10	71/1	129/14	50/10	5
Area F-2 (320'x220)	79/7	30/4	63/7	20/5	6
TOTALS	372/33	159/20	284/31	164/24	7

(2) Weapons/sorties operationally required to achieve "over target" requirements shown above:

456/38	191/22	342/38	176/29
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(3) In order to achieve a damage level of 70%, weapons/sorties required over target:

WEAPON	250# SNAKEYE	500# SNAKEYE	500# BOMB	750# BOMB	
Area E-1	7/1	7/1	24/3	24/4	1
Area E-2	20/2	20/2	20/2	20/3	2
Area E-3	277/23	111/12	211/23	96/16	3
Area E-4	5/1	5/1	13/1	13/2	4
Area F-1	654/55	263/29	435/48	198/33	5
Area F-2	265/27	107/12	211/23	96/16	6
TOTAL	1233/104	513/57	914/100	447/74	7

(4) Weapons/sorties operationally required to achieve "over target" requirements shown above:

1420/124	616/69	1098/123	537/90
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15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%.

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A-D-B-4

(Revised by 17th Note to Holders)

Tab B to
Annex D to
Appendix A

RET

TARGET NO. 77



(Revised by 14th N/H)

A-D-C-1

Tab C To Annex D
To Appendix A

~~SECRET~~

TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 77 1
2. BE NUMBER: 616-0261 2
3. IDENTIFICATION: Ha Noi Machine Tool and Engineering Equipment Plant 3
4. DATE OF INFORMATION: 3 April 1968 4
DATE OF TIS: 25 April 1968 5
DATE OF PHOTOGRAPHY: 18 October 1967 6
DATE OF INTELLIGENCE REVIEW: 6 March 1968 7
5. LOCATION: 21-00-00N 105-49-14E 8
6. DESCRIPTION: The plant has about 567,000 square feet of floor plan area. It has a forge and foundry, a machine shop area with five large machine shops, 10 support buildings, and an open storage area. The plant is road-served only. 9
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7. SIGNIFICANCE: This installation is the only significant machine tool plant in North Vietnam, accounting for 100 percent of the national capacity of 1200 units a year. Production for 1967 was estimated at 500 units. Tools produced include lathes, milling machines, drills and planers. Production of machine tools has been limited because of the inability of the economy to utilize them. Some of the capacity is used to manufacture simple machinery and irrigation pumps, and to repair machinery. There is no evidence of the manufacture of weapons, but the facilities suggest a potential for producing simple weapons such as grenade launchers and mortars. This plant reportedly produces a small quantity of pig iron for its own use. 13
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8. TARGET ENVIRONMENT: The target is about ten feet above sea level. It is about 3 NM SW of the center of Ha Noi and 3 NM NE of Ha Dong, on the NW side of the highway connecting the two towns. Many built up areas, mostly industrial, are along the road, particularly SE of the target. Target is on broad, flat, low plains which extend more than 10 NM from the target in all directions. The plains are intensively cultivated in wetland rice. A small stream flows southward along the NE side of the target and joins the SE-flowing Song Nhue Giang River, 3 NM S of the target. An airfield is located 1 NM E of the target. 26
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9. DEFENSE ENVIRONMENT: 37
 - a. The target is within the SAM envelope. 38
 - b. AAA has been identified within 3 NM of the target. 39
 - c. HMG and small arms fire is anticipated. 40
10. DAMAGE OBJECTIVE: Production loss. Damage to machine tools used in manufacturing operations, accompanied by damage to buildings, other equipment, materials in process, and utilities. Damage level is 30 percent. 41
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11. EFFECT ON NVN: Although the output of this complex is primarily non-military in nature, a strike achieving 30 percent damage would indirectly tend to reduce war-supporting resources and disrupt economic development. 45
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12. RECUPERABILITY: Achieving a damage level of 30 percent would destroy or severely damage some machinery and structures which would require at least 18 months time and external assistance to replace.

13. COLLATERAL DAMAGE:

a. Light damage to surrounding area.

Population				Casualties*			
Target Area		Adjacent Area		Target Area		Adjacent Area	
Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ
0	340	0	1900	0	21	0	19

* Casualties estimated under daylight alert conditions.

14. RECOMMENDED WEAPONS AND SORTIES:

This target is comprised of three areas. All three areas have been combined for weapons application. Weapons and sorties have been computed for this area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target are also shown:

(1) In order to achieve a damage level of 30%, weapons/sorties required over target:

WEAPON	500# <u>SNAKEYE</u>	750# <u>BOMB</u>
Areas A, B, and C (1000 x 1000)	280/31	145/24

(2) Weapons/Sorties operationally required to achieve over target requirements shown above:

336/37	174/29
--------	--------

(3) In order to achieve a damage level of 70%, weapons/sorties required over target:

936/104	490/82
---------	--------

(4) Weapons/sorties operationally required to achieve "over target" requirements shown above:

1123/125	588/98
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15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%

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(REVISED BY 14TH NOTE TO HOLDERS)

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(2) Weapons/sorties operationally required to achieve "over target" requirements shown above:

555/47 670/56 268/30 122/21

(3) In order to achieve a damage level of 70%, weapons/sorties required over target:

WEAPON	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	750# BOMB
Areas A, B, and C	1535/128		1850/155		742/83		337/57

(4) Weapons/sorties operationally required to achieve "over target" requirements shown above:

1872/156 2256/188 905/101 411/69

15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%.

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(Added by 10th Note to Holders)

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 77.1
2. BE NUMBER: 616-0706
3. IDENTIFICATION: Hai Phong Cement Plant
4. DATE OF INFORMATION: 19 July 1968
DATE OF TISD: 11 March 1969
DATE OF PHOTOGRAPHY: 26 January 1965
DATE OF INTELLIGENCE REVIEW: 12 December 1968
5. LOCATION: 20-51-44N 106-40-18E, located in NW Hai Phong.
6. DESCRIPTION: Target contains a crusher building (F), 3 kiln buildings housing 8 kilns (G), about 20 storage/warehouses (E, I, and D), 4 slurry tanks (H), 8 cement silos (E), several conveyors, and a coal treatment area (J). There are 2 areas for off-loading clay and limestone (A and I) from barges, and road and rail access to the target complex. The Hai Phong Thermal Power Plant (JCS #80) is located just S of the target and supplies power to the cement plant.
7. SIGNIFICANCE: This installation is the only cement plant in NVN. Estimated annual capacity is 700,000 metric tons of mainly Portland, and some special cements. It was expanded to present capacity in 1960 with Rumanian aid. Most of the cement is used domestically.
8. TARGET ENVIRONMENT: Target, about 5' above sea level, on S bank of Chu Cam stream, less than 1 NM upstream from its mouth on Gulf of Tonkin. Hai Phong is surrounded by flat plain intensively cultivated to wetland rice; plain crossed by NW-SE oriented meandering streams, and randomly oriented, interconnecting distributaries and canals; most waterways contained by levees. Roads converge on city from all directions; principal road and RR enter city from NW, pass less than 0.5 NM W of target; road connecting E through city crosses canal bridge 900' S of target site. Approach from Gulf of Tonkin coast to target site is NW across low mangrove bordered coastline and flat, rice cultivated plain to city; airfields SE of target on line with this approach. N of target, plain interrupted by low, wooded hills, 130' to 480' above sea level.
9. DEFENSE ENVIRONMENT:
 - a. Target is within SAM envelope.
 - b. AAA activity has been identified within 3 NM of target.
 - c. HMG and small arms fire is anticipated.
10. DAMAGE OBJECTIVE: Destruction of the three kiln buildings. Damage level is 30%.

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D To Appendix A

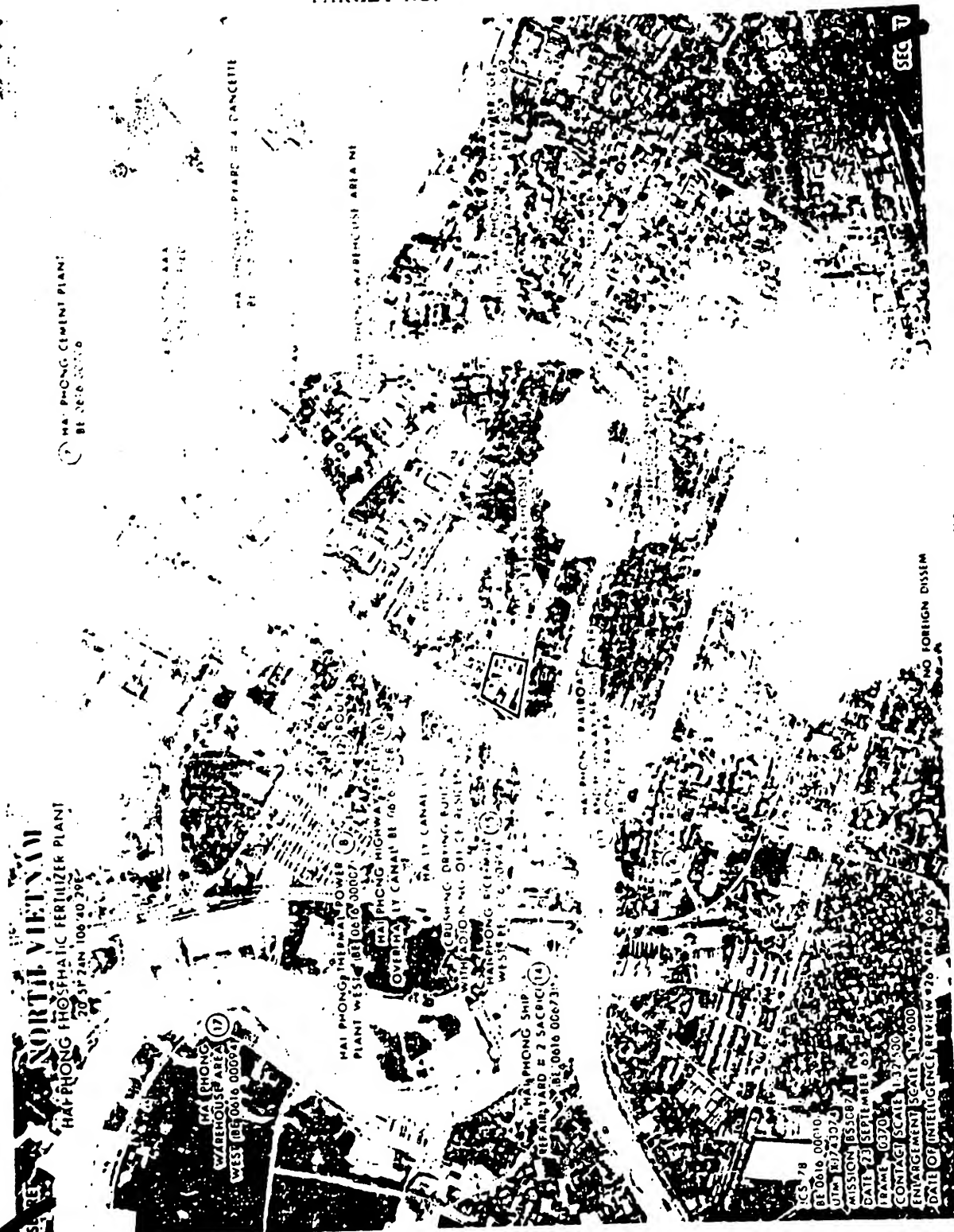
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TAB D TO ANNEX D TO APPENDIX A

TARGET NO. 78



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(Revised by 10th N/11)

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 78 1
2. BE NUMBER: 616-0010 2
3. IDENTIFICATION: Hai Phong Phosphatic Fertilizer Plant 3
4. DATE OF INFORMATION: 12 August 1966 4
DATE OF TIS: 13 August 1966 5
DATE OF PHOTOGRAPHY: 23 September 1965 6
DATE OF INTELLIGENCE REVIEW: 26 April 1966 7
5. LOCATION: 2D51-24N 106-40-29E, UTM XJ 743074 8
6. DESCRIPTION: The target area contains two processing buildings 9
(A), one with a 3-story office/residential section, four warehouses (C), 10
and five support buildings (B). The facility is served by canal and road. 11
7. SIGNIFICANCE: This is an old plant, rebuilt in 1958 with Soviet 12
aid, which produces phosphatic fertilizer by simple processing (crushing 13
and drying) of apatite ore. The facilities and processing are neither 14
extensive nor complex; it is believed to produce approximately 25,000 15
metric tons of fertilizer per year, which is about eight per cent of North 16
Vietnam's estimated total production of 325,000 metric tons. 17
8. TARGET ENVIRONMENT: The target is situated a few feet above 18
sea level, on the western side of the island that makes up the western part 19
of the city of Hai Phong. It is located in an area of industrial plants and 20
residential structures. Hills rise to about 480 feet about 4 NM to the 21
north, and 460 feet about 5 NM to the south and southwest. 22
9. DEFENSE ENVIRONMENT: 23
 - a. Sixteen SAM sites have been identified within SA-2 missile 24
range (17.5 NM) of the target, and 12 additional SAM sites have been 25
identified 18-30 NM distant. 26
 - b. Identified AAA activity within 3 NM of the target includes 14 27
active AAA sites, consisting of 8 occupied 100mm revetments, 67 28
occupied 57mm/85mm revetments, and 11 occupied 37mm revetments. 29
There are 7 inactive sites in the immediate area and a total of 27 30
active sites in the entire Hai Phong complex. (DOI: 20 July 1965 - 31
10 April 1966) 32
 - c. Moderate to intense HMG and small arms fire is anticipated 33
throughout the Hai Phong area. 34

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10. DAMAGE OBJECTIVE: Disruption of process operations. Damage criterion is structural damage to principal ore processing buildings, accompanied by damage to conveyors and storage warehouses. Damage level is 30%.

11. EFFECT ON NVN: Destruction of this facility would result in a limited reduction of the supply of fertilizers available to North Vietnamese agriculture.

12. RECUPERABILITY: North Vietnam is not known to manufacture any of the major components of this type plant. However, facilities probably exist at the Hanoi Machine Tool and Engineering Equipment Plant (BE Number 616-0261) or at the Thai Nguyen Iron and Steel Combine (BE Number 616-0214) for repair or reconstruction of crushers, grinders, and tube mills. Replacement would require several months.

13. COLLATERAL DAMAGE:

a. Light damage to surrounding area.

b. Population

Casualties*

Target Area		Adjacent Area		Target Area		Adjacent Area	
Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ
0	80	0	7300	0	5	0	73

*Casualties estimated under daylight alert conditions.

14. RECOMMENDED WEAPONS AND SORTIES:

This target is comprised of one area (with 3 sub-areas) which has been delineated for weapons application. Weapons and sorties have been computed for this area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target are also shown:

(1) In order to achieve a damage level of 30%, weapons/sorties required over target:

WEAPON	250# SNAKEYE	or	500# BOMB	or	750# BOMB	or	1000# BOMB	
Area A (250x400)	33/3		27/3		14/3		11/4	29

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(2) Weapons/sorties operationally required to achieve "over target" requirement shown above: 1
2

40/4 33/4 17/3 13/5 3

(3) In order to achieve a damage level of 70%, weapons/sorties required over target: 4
5

WEAPON	250# SNAKEYE	or	500# BOMB	or	750# BOMB	or	1000# BOMB	
Area A	111/10		91/11		48/8		37/13	6

(4) Weapons/sorties operationally required to achieve "over target" requirement shown above: 7
8

135/12 111/13 59/10 45/15 9

15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50% 10

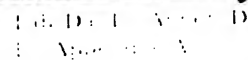
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Appendix A

(Added by 10th Note to Holders)

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 78.1 1
2. BE NUMBER: 616-0629 2
3. IDENTIFICATION: Phu Tho Chemical Fertilizer Plant Lam Thao 3
4. DATE OF INFORMATION: 3 April 1968 4
DATE OF TIS: 23 April 1968 5
DATE OF PHOTOGRAPHY: 18 October 1967 6
DATE OF INTELLIGENCE REVIEW: 5 March 1968 7
5. LOCATION: 21-20-00N 105-17-20E 8
6. DESCRIPTION: The plant is made up of the following areas: 9
sulfuric acid production, fertilizer production, by-products 10
storage, administration/quarters, vehicle maintenance, and 11
pyrite waste. It is road and rail served. 12
7. SIGNIFICANCE: This plant was built with Soviet aid, and 13
was completed in mid-1962. It is reputed to be the most modern 14
chemical fertilizer plant in S.E. Asia. It has an estimated 15
annual capacity of 200,000 metric tons of superphosphate, or 16
56 percent of estimated national capacity, and 36,000 MT of 17
sulfuric acid. 18
8. TARGET ENVIRONMENT: Target, about 50 ft. above sea level, 19
is located on flat, rice-cultivated plains which border the river 20
and extend to dissected plains 1.3 NM NE and 2.6 NM SW of target. 21
Dissected plains are about 250 ft. above sea level and are 22
partly wooded, partly cultivated. Wooded, NW-SE trending hills, 23
with peaks 1,000 ft. above sea level, are located 7 NM SW of 24
target; a large wooded hill reaching 2,200 ft. above sea level is 25
located 10 NM NW of target. A rail line enters the target from 26
the N, and a N-S road borders the E side of target. Many villages 27
are located in the immediate area of the target. 28
9. DEFENSE ENVIRONMENT: 29
 - a. The target is within the SAM envelope. 30
 - b. AAA activity has been identified within 3 NM of 31
the target. 32
 - c. HMG and SA fire is anticipated. 33
10. DAMAGE OBJECTIVE: Thirty percent structural damage to 34
sulfuric acid section, mixing and curing building, and warehouses. 35
11. EFFECT ON NVN: Loss of fertilizer production would have 36
no direct effect on war-making potential, but would have a 37
slight adverse effect on food production. The plant reportedly 38
will turn out 14 percent of national superphosphate require- 39
ments. Loss of sulfuric acid would adversely effect production 40
of other chemicals and fertilizers. 41
12. RECUPERABILITY: Thirty percent damage to the vital com- 42
ponents of this target could not be repaired locally. The plant 43
took about three years to construct with Soviet assistance, and the 44
Soviets would have to furnish the equipment and technology to re- 45
build it. This could take as long as a year. 46

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13. COLLATERAL DAMAGE:

a. Insignificant

b. Population

Casualties*

Target Area		Adjacent Area		Target Area		Adjacent Area	
Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ
0	400	0	450	0	24	0	5

* Casualties estimated under daylight alert conditions.

14. RECOMMENDED WEAPONS AND SORTIES:

This installation is comprised of six areas. One area has been delineated for weapons application. Weapons and sorties have been computed for this area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target are also shown:

(1) In order to achieve a damage level of 30%, weapons/sorties required over target:

WEAPON	500# <u>SNAKEYE</u>	750# <u>BOMB</u>
Area A (250 x 1050)	107/12	154/26

(2) Weapons/sorties operationally required to achieve "over target" requirement shown above:

129/14	185/31
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(3) In order to achieve a damage level of 70%, weapons/sorties required over target:

360/40	520/87
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(4) Weapons/sorties operationally required to achieve "over target" requirements shown above:

432/48	625/104
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15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%

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(REVISED BY 14TH NOTE TO HOLDERS)

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WEAPON	500# BOMB	or	750# BOMB	or	1000# BOMB	or	2000# BOMB	
	810/90		583/98		518/173		202/202	1
(4) Weapons/sorties operationally required to achieve "over target" requirements shown above:								2 3
	988/110		711/119		632/211		246/246	4
15. <u>PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL:</u>							50%.	5

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A-D-Da-4

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Appendix A

(Added by 10th Note to Holders)

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 79
2. BE NUMBER: 616-0142
3. IDENTIFICATION: Bac Giang Chemical Fertilizer Plant
4. DATE OF INFORMATION: 2 April 1968
DATE OF TIS: 24 April 1968
DATE OF PHOTOGRAPHY: 15 December 1967
DATE OF INTELLIGENCE REVIEW: 4 March 1968
5. LOCATION: 21-18-10N 106-12-25E
6. DESCRIPTION: The installation is made up of a nitrate/coal gas production unit, a nitric acid production area, a nitrate production area, a storage area, a fertilizer production and storage area, two pumphouse and water intake areas, a water treatment area, and a possible phosphate production unit. The plant is road, rail, and water served. The Bac Giang Thermal Power Plant, JCS 82.26, 0616-00699, is co-located.
7. SIGNIFICANCE: This modern nitrogenous fertilizer plant was completed with Chinese aid in the first half of 1966, but apparently never got into production. Capacity is estimated at 100,000 metric tons of chemical fertilizer per year, 28 percent of estimated national capacity. It is believed to produce other chemicals for agricultural and industrial use.
8. TARGET ENVIRONMENT: Target, about 10 ft. above sea level, is 2.0 NM N of Bac Giang and 0.2 NM E of the SE-flowing Song Thuong (river). Target is on rice-cultivated plains which contain many low, terraced hillocks and many small, compact villages. Hillocks are generally less than 20 ft. higher than the plains. Belt of E-W trending, grass- and scrub-covered hills, 7.0 NM long and 1.5 NM wide, located 5.0 NM S of target; maximum height 860 ft. above sea level. Three small, grassy, nearly contiguous hills begin 1.5 NM W of target and extend SW for 3.0 NM; maximum elevation 400 ft. above sea level.
9. DEFENSE ENVIRONMENT:
 - a. The target area is within the SAM envelope.
 - b. AAA activity has been identified within 3 NM of the target.
 - c. HMG and SA fire is anticipated.
10. DAMAGE OBJECTIVE: Disruption of process operations and production loss. Damage criterion is structural damage to principal processing units and major buildings, especially the ammonia synthesis and nitric acid buildings. Damage level is 30 percent.

~~SECRET~~ NO FOREIGN DISSEM EXCLUDED FROM AUTOMATIC DOWNGRADING

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(REVISED BY 14TH NOTE TO HOLDERS)

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11. EFFECT ON NVN: Little direct effect on war-making potential, but would be major loss to the agricultural sector of the economy.

12. RECUPERABILITY: Restoration of this plant to full, preattack capability would probably require several months, as North Vietnam is not known to manufacture any of the major components. Replacement of even minor portions of this equipment would require imports of material and skilled labor from Communist China. Installation, testing and adjustments of new process units would take months.

13. COLLATERAL DAMAGE:

a. Light damage to surrounding area

Population				Casualties*			
Target Area		Adjacent Area		Target Area		Adjacent Area	
Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ
0	780	0	4050	0	47	0	41

* Casualties estimated under daylight alert conditions.

14. RECOMMENDED WEAPONS AND SORTIES:

This is a large facility comprised of 9 areas. Three areas have been delineated for weapons application. Weapons and sorties have been computed for each area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target are also shown:

(1) In order to achieve a damage level of 30%, weapons/sorties required over target:

WEAPON	500# <u>SNAKEYE</u>	750# <u>BOMB</u>
Area B (500 x 500)	84/9	51/8
Area C (500 x 650)	102/11	61/10
Area E (500 x 1300)	69/8	43/7
Totals	255/28	155/25

(2) Weapons/sorties operationally required to achieve "over target" requirements shown above:

306/34	186/31
--------	--------

(3) In order to achieve a damage level of 70%, weapons/sorties required over target:

283/31	172/29
344/38	206/34
232/26	145/24
Totals	859/95
	523/87

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(4) Weapons/sorties operationally required to achieve
"over target" requirements shown above:

1030/115

628/105

15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%

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(REVISED BY 14TH NOTE TO HOLDERS)

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TAB F TO ANNEX D TO APPENDIX A
TARGET NO. 50



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1. TARGET NUMBER: 20

2. BE NUMBER: 616-0007

3. IDENTIFICATION: Hai Phong Thermal Power Plant West

4. DATE OF INFORMATION: 16 August 1968
DATE OF TISD: 12 March 1969
DATE OF PHOTOGRAPHY: 26 January 1965
DATE OF INTELLIGENCE REVIEW: 11 December 1968

5. LOCATION: 20-51-30N 106-40-19E, located in the NW section of Hai Phong.

6. DESCRIPTION: This thermal power plant of 10,000 kw. is located on the south side of the Hai Phong Cement Plant (JCS #77.1). The target consists of two boiler houses, transformer building, generator hall, two large octagonal cooling towers, coal storage shed, conveyor and barge off-loading facility, and miscellaneous buildings and equipment. The target area is served by rail, primary road and water way. Blast walls are being constructed around generating facilities and boiler houses.

7. SIGNIFICANCE: This is one of the larger power plants in the DRV, supplying about 5% of the national capacity. Supplies electric power to the Hai Phong Cement Plant.

8. TARGET ENVIRONMENT: The target is located on the South side of the Hai Phong Cement Plant compound, at near sea level. The power plant is bounded on the North by buildings and installations of the cement plant. Urban obstructions of Hai Phong lie within one NM S of the target. The plant area is bounded on the E by the Ha Ly road. The primary road and railroad pass 2,000' WSW of the target; the Hai Phong Highway Bridge 1,000' SE of the power plant. The flat, level terrain surrounding the target area is interrupted in the N by low, wooded, hills rising from 130' to 150' above sea level.

9. DEFENSE ENVIRONMENT:

a. The target is within the SAM envelope.

b. AAA activity has been identified within 3 NM of the target.

c. EMO and small arms fire is anticipated.

10. DAMAGE OBJECTIVE: Production loss. Damage criterion is structural damage to power plant buildings with accompanying damage to generating units, boilers, transformers, switching and control equipment and auxiliary components. Damage level is 70%.

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11. EFFECT ON NVN: Destruction of the target would eliminate the only power plant in Hai Phong large enough to supply the cement plant. The second power plant in Hai Phong (JCS #82.12) could supply only a part of the requirements of the cement plant and would deprive the Hai Phong Port Facilities (JCS #70) including the Hai Phong Shipyards, and other major consumers of electricity.

12. RECUPERABILITY: Restoration of the transformer would require from 6 to 12 months. The power plant can resume partial operation after one year on an emergency basis by utilizing damaged and repaired equipment. Reconstruction of the plant to full capacity would require from 18 to 24 months.

13. COLLATERAL DAMAGE:

a. Insignificant

b. Population

Casualties*

Target Area		Adjacent Area		Target Area		Adjacent Area	
Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ
0	35	0	300	0	2	0	3

*Casualties estimated under daylight alert conditions.

14. RECOMMENDED WEAPONS AND SORTIES:

This target is comprised of 4 areas. Two areas (with 4 sub-areas) have been delineated for weapons application. Weapons and sorties have been computed for this area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target are also shown:

(1) In order to achieve the damage level of 70%, weapons/sorties required over target:

WEAPON	250#	or	500#	or	500#	or	750#
	SNAKEYE		SNAKEYE		BOMB		BOMB
Areas A and B (100' x 500')	13/1		13/1		18/2		18/3

(2) Weapons/sorties operationally required to achieve "over target" requirement shown above:

10/1	16/2	22/2	22/4
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15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%.

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(Revised by 17th Note to Holders)

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TAB G TO ANNEX D TO APPENDIX A

TARGET NO. 81

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NORTH VIETNAM
HA NOI THERMAL POWER PLANT
21 02 35N 105 50 33E



HA NOI THERMAL POWER PLANT
A. POWER PLANT MAIN AREA
1. GENERATOR BUILDING 240 FEET X 50 FEET
2. BOILER HOUSE 175 FEET X 100 FEET
3. TRANSFORMER AND CONTROL BUILDING 150 FEET X 75 FEET
4. COAL STORAGE AREA PREPARATION BUILDING
5. COVERED COAL STORAGE BUILDINGS
AND 1 COAL CONVEYOR
6. WEAPON TEST AREA
7. ADMINISTRATION AREA 3 ADMINISTRATION BUILDINGS, 2 SUPPORT BUILDINGS
8. SHOP AREA 1 MACHINE SHOP, 3 WORKSHOPS
9. SUPPORT AREA 10 BUILDINGS

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UN OIC 00016
DATE OF PHOTO 23 DECEMBER 1968
SCALE VARIABLE
DATE OF INTELLIGENCE REVIEW 20 MARCH 1969
PHOTO REFERENCE: BS00320 12 135

NO FOREIGN DISSEM

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(Revised by 14th N/H)

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 81
2. BE NUMBER: 616-0016
3. IDENTIFICATION: Ha Noi Thermal Power Plant
4. DATE OF INFORMATION: 15 March 1968
DATE OF TIS: 22 March 1968
DATE OF PHOTOGRAPHY: 25 December 1967
DATE OF INTELLIGENCE REVIEW: 15 March 1968
5. LOCATION: 21-02-33N/105-50-53E.
6. DESCRIPTION: This thermal power plant has an installed capacity of 32,500 kw. The target area is trapezoidal in shape, with maximum dimensions of 250 feet by 700 feet, and consists of: multi-story vented boiler house with five smokestacks, an auxiliary boiler house section with two stacks, generator hall, transformer and control building, coal storage area with conveyor system, and support buildings. The boiler house and generator hall are of concrete and brick construction and are partially enclosed by a concrete blast wall and revetment.
7. SIGNIFICANCE: This target is the largest power plant in the NVN comprising 17% of the national capacity and is the only major power plant in Ha Noi. The facility is a primary source of power for the urban area, serving national military control centers and key military installations, as well as industrial, governmental, and public consumers. The plant also supplies alternate and peak load power throughout northeast NVN to military and industrial facilities including ports and naval repair yards.
8. TARGET ENVIRONMENT: The target is located in the northern part of the built up area of the city of Ha Noi, situated on low flat ground, at an elevation of approximately 10 feet. The immediate vicinity of the target is mostly residential. A north-south railroad line passes 2,000 feet to the southeast. The plant is 540 feet due east of Truc Bach Lake and 2,000 feet southwest of the Red River.
9. DEFENSE ENVIRONMENT:
 - a. The target is within the SAM envelope.
 - b. AAA activity has been identified within 3 NM of the target.
 - c. HMG and small arms fire is anticipated.
10. DAMAGE OBJECTIVE: Production loss. Damage criterion is structural damage to station buildings with accompanying damage to turbo-generators, boilers, transformers, switching and control equipment, and auxiliary components. Damage level is 70 percent.

~~SECRET~~ NO FOREIGN DISSEM EXCLUDED FROM AUTOMATIC DOWNGRADING

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(REVISED BY 14TH NOTE TO HOLDERS)

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11. EFFECT ON NVN: Destruction of this target would eliminate the only major generating installation located within Ha Noi and would significantly reduce the available supply of electricity for military and industrial facilities over a wide area. Sufficient electric power to offset loss of the Ha Noi Powerplant potentially could be obtained from the national transmission network, served by the Uong Bi (BE No. 616-0438), Thai Nguyen (BE No. 616-0382), and Viet Tri (BE No. 616-0380) Powerplants. This effort to compensate for destruction of the Ha Noi Powerplant, however, would result in a deficiency of electricity in areas normally supplied by these installations.

12. RECUPERABILITY: Destruction of the target would require six to nine months for partial restoration to one fourth of pre-strike capacity and eighteen to twenty four months for complete reconstruction.

13. COLLATERAL DAMAGE:

a. Light damage to surrounding area.

Population				Casualties*			
Target Area		Adjacent Area		Target Area		Adjacent Area	
Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ
0	75	0	1400	0	5	0	14

*Casualties estimated under daylight alert conditions.

14. RECOMMENDED WEAPONS AND SORTIES:

This target is comprised of four areas. A portion of one area has been delineated for weapons application. Weapons and sorties have been computed for this area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target are also shown:

(1) In order to achieve the damage level of 70%, weapons/sorties required over target:

Weapon:	500# Snakeye	750# Bomb
Area A (weaponeered portion) (140' x 230')	5/1	13/2
Totals:	5/1	13/2

(2) Weapons/sorties operationally required to achieve "over target" requirements shown above:

6/1	16/3
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15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%

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A-D-G-3
(REVISED BY 14TH NOTE TO HOLDERS)

Tab G to
Annex D to
Appendix A

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 82
2. RE NUMBER: 616-0438
3. IDENTIFICATION: Cong B. Thermal Power Plant
4. DATE OF INFORMATION: 10 September 1968
DATE OF TISD: 24 January 1969
DATE OF PHOTOGRAPHY: 23 September 1965
DATE OF INTELLIGENCE REVIEW: 13 November 1968
5. LOCATION: 21-02-15N 106-47-27E, located 14 NM NE of Hai Phong.
6. DESCRIPTION: This thermal power plant has an installed capacity of 24,000 kw. The plant consists of a boiler house with 2 boilers, a 150' smokestack, a generator hall containing 2 generators, a transformer yard, a coal storage area with conveyor, 8 POI tanks, and numerous warehouses and support buildings. A condenser/water intake and pump house is located at the river. Blast walls are under construction to protect existing power generating facilities.
7. SIGNIFICANCE: One of the largest power plants in the country comprising about 16% of the national capacity. The power plant supplies the bulk of its power production to Ha Noi by a 110 kv transmission line connection to the Ha Noi Transformer Station Dong Anh (JCS number 0045) (JCS No. 82.24) and most of the remaining electricity is transmitted to Hai Phong by a 110 kv line.
8. TARGET ENVIRONMENT: The target is located in the NE part of Cong B. 1,000' NW of a river and 1,200' E of a railroad line, at about 40' above sea level. The area lies on a narrow plain between a flat, swampy area to the S and hills to the N which rise to an elevation of 600' to almost 1800' within 3 NM.
9. DEFENSE ENVIRONMENT:
 - a. The target is within the SAM envelope.
 - b. AAA fire has been identified within 2 NM of the target.
 - c. HMG and small arms fire is anticipated.
10. DAMAGE OBJECTIVE: Production loss. Damage criterion is structural damage to station buildings with accompanying damage to turbo-generators, boilers, transformers, and auxiliary components. Damage level is 70 percent.
11. EFFECT ON NVN: Destruction of this target would eliminate a major source of electric power to Ha Noi and Hai Phong. The target supplies one-quarter of the power requirements of Ha Noi and one-third of those of Hai Phong.

~~SECRET~~ NO FOREIGN DISSEM EXCLUDED FROM AUTOMATIC DOWNGRADING

A-D-II-2

(Revised by 1st Note to Holders)

Classified
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12. RECUPERABILITY: Destruction of the power plant's transformer yard would prevent operation for a period of from 9 to 12 months. Major damage to the power plant structures, boilers, or generator units would require a period of from 15 to 22 months for partial restoration and 26 months for complete restoration.

13. COLLATERAL DAMAGE:

a. Light damage to surrounding area.

Population				Casualties*			
Target Area		Adjacent Area		Target Area		Adjacent Area	
Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ
0	35	0	400	0	2	0	4

*Casualties estimated under daylight alert conditions.

14. RECOMMENDED WEAPONS AND SORTIES:

This target is comprised of 7 areas. One area (which includes portions of 2 target areas) has been delineated for weapons application. Weapons and sorties have been computed for this area. To show the effort required to achieve the expected damage. Total weapons/sorties required over the target are also shown:

(1) In order to achieve a damage level of 70%, weapons/sorties required over target:

WEAPON	250#	500#	500#	750#
	SNAKEYE or	SNAKEYE or	BOMB or	BOMB
Areas A and F (335' x 230')	8/1	8/1	15/2	15/3

(2) Weapons/sorties operationally required to achieve "over target" requirement shown above:

10/1	10/1	18/2	18/3
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15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%

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A-B-II-3

(Revised by 10th Note to Holders)

Amex 1 to
Appendix A

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TAB I TO ANNEX D TO APPENDIX A

TARGET NO. 82.1



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A-D-I-1

Tab I to Annex D
to Appendix A

~~TOP SECRET~~

TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 82.1 1

2. BE NUMBER: 617-0533 2

3. IDENTIFICATION: Thanh Hoa Thermal Power Plant 3

4. DATE OF INFORMATION: 31 March 1965 4
DATE OF TIS: 20 June 1966 5

5. LOCATION: 19-50-03N/105-47-28E, UTM WG 826931 6

6. DESCRIPTION: Target area consists of: generator hall/ 7
multi-story boiler house with one tall smokestack, transformer 8
yard, possible water pump house, and five supporting buildings. 9
The target area is approximately 525 x 390 feet. 10

7. SIGNIFICANCE: This thermal power plant has an installed 11
capacity of 5,000 kilowatts, comprising about three percent of 12
the current national capacity. It supplies power to indus- 13
trial installations in Ham Rong (19-51N/105-46E) and the town 14
of Thanh Hoa. Expansion of plant capacity to about 10,000 15
kilowatts is scheduled. 16

8. TARGET ENVIRONMENT: Target, about 15 feet above sea 17
level, is about 2.0 NM NNE of the center of Thanh Hoa, 0.3 18
NM W of the SSE-flowing Song Ma (river) and 0.2 NM E of the 19
base of an isolated, grassy hill which reaches 400 feet above 20
sea level. Very low hillocks are located 0.3 NM north of 21
target. Terrain otherwise consists of broad, flat plains 22
cultivated in wetland rice. Target is 6.2 NM WNW of the 23
broad mouth of the Song Ma. 24

9. DEFENSE ENVIRONMENT: 25

a. AAA defenses in the target vicinity include 24 26
occupied light (14.5mm-37mm) AAA positions located within 27
0.6 NM of the target. Additionally, there is an unoccupied 28
57mm/85mm position at one of the aforementioned sites and 29
an inactive 5-position (light) AAA site located approxi- 30
mately 3.2 NM south of the target. Numerous AW positions 31
may be located in the vicinity of the target, due mostly 32
to its proximity to the bridge crossing the Song Ma. 33
(DOI: 13 & 21 February 1965). 34

b. The 269th Independent Infantry Regiment and the 57th 35
Infantry Regiment of the 304th Division are located at 36
Thanh Hoa. Additionally, the 486th Coastal Security 37
Battalion is located at nearby Sam Son, approximately 38
7 NM southeast of Thanh Hoa. 39

c. Within 5 NM of Thanh Hoa (19-48N/105-47E) are located 40
two confirmed radars, a RUS-2 and a SCR-270. At My Duc, 41
about 10 NM northeast, there is a CROSS-SLOT radar. 42

10. DAMAGE OBJECTIVE: Production loss. Damage criterion 43
is structural damage to plant buildings with accompanying 44
damage to generators, boilers, transformers, and auxiliary 45
components. Damage level is 70 percent. 46

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A-D-I-2

Tab I to
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Appendix A

(Revised by 8th Note to Holders)

1947 RV-2

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11. EFFECT ON: Destruction of this target would eliminate the only source of electric power large enough to adequately supply present requirements of Thanh Hoa and industries in Ham Rong.

12. RECUPERABILITY: Destruction of the power plant structures, boilers, generator units, and transformers would require a period of from twelve to fifteen months for restoration. Units now on order for scheduled expansion would be available by this time for replacement of damaged equipment.

13. COLLATERAL DAMAGE: Light to moderate damage to surrounding buildings.

14. RECOMMENDED WEAPONS AND SORTIES:

a. In order to achieve the desired damage level of 70%, weapons/sorties required over target:

Weapon	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	750# BOMB
	7/1		17/1		17/2		17/3

b. Weapons/sorties operationally required to achieve "over target" requirements shown above:

9/1	21/2	21/3	21/4
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15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%

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A-D-I-3

Tab I to
Annex D to
Appendix A

(Revised by 7th Note to Holders)



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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 82.11 1
2. B.E. NUMBER: 0617-0036 2
3. IDENTIFICATION: Ben Thuy Thermal Power Plant 3
4. DATE OF INFORMATION: 31 August 1968 4
DATE OF TISE: 20 November 1968 5
DATE OF PHOTOGRAPHY: 13 May 1965 6
DATE OF INTELLIGENCE REVIEW: 10 September 1968 7
5. LOCATION: 18-38-49N 105-42-20E. The target is located 8
2.2 NM SE of Vinh. 9
6. DESCRIPTION: This coal-burning powerplant was 10
completed in 1959 with a total installed capacity of 8,270 kw, 11
including a 270-kw diesel unit. The target consists of a 4- 12
story one-stack concrete boiler/generator building, trans- 13
former building, coal storage with conveyor, 6 POL tanks, 14
and approximately 10 support buildings. The boiler/generator 15
building contains 3 boilers, 2 steam-generating units, and 16
a small diesel unit. The powerplant is served by a primary 17
road. Target area is approximately 1,000 x 650 feet. Blast 18
walls under construction to protect power generating facilities. 19
7. SIGNIFICANCE: One of the more important powerplants 20
in North Vietnam, comprising about 5% of the national capacity 21
in 1964. The plant supplies power to the industrial and mili- 22
tary installations in the Ben Thuy and the Vinh Areas and to 23
the Ben Thuy port facilities. 24
8. TARGET ENVIRONMENT: The target is located in the 25
SE part of Ben Thuy, situated on low, flat ground at an 26
elevation of approximately 10'. The Song Ca River is located 27
about 400 yards to the E. A number of military and industrial 28
installations are located to NW, NE, and SE. A small hilly 29
area over 300' in elevation is located 0.15 NM SW of the 30
target. 31
9. DEFENSE ENVIRONMENT: 32
 - a. Target is within the SAM envelope. 33
 - b. AAA activity has been identified within 3 NM 34
of the target. 35
 - c. HMG and small arms fire is anticipated. 36
10. DAMAGE OBJECTIVE: Production loss. Damage criterion 37
is structural damage to plant buildings, with accompanying 38
damage to generators, boilers, transformers, and auxiliary 39
components. Damage level is 70%. 40
11. EFFECT ON NVN: Destruction of the target will 41
deprive Vinh and Ben Thuy of electric power and will elimin- 42
ate one of the few significant powerplants available in the 43
southern half of North Vietnam. 44

~~SECRET~~ NO FOREIGN DISSEM EXCLUDED FROM AUTOMATIC DOWNGRADING

(Revised by 15th Note to Holders)

A-10-J-2

TAB J to
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Appendix A

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12. RECUPERABILITY: Within about one year, the plant can operate on an emergency basis, utilizing salvaged and repaired equipment at about 50% of normal capacity. Full capacity can be attained in about 2 years after the initial damage through diversion of equipment from other plants.

13. COLLATERAL DAMAGE:

a. Light to moderate damage to surrounding buildings.

b. Population Casualties*

Target Area Adjacent Area Target Area Adjacent Area

Mil Civ Mil Civ Mil Civ Mil Civ

0 45 5 140 0 3 0 2

*Casualties estimated under daylight alert conditions

14. RECOMMENDED WEAPONS AND SORTIES:

This target is comprised of 5 areas. One area (which includes 2 component areas) has been delineated for weapons application. Weapons and sorties have been computed for the area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target are also shown:

(1) In order to achieve a damage level of 70%, weapons/sorties required over target:

WEAPON	250# SNAKEYE	or	500# SNAKEYE	or	500# BOMB	or	750# BOMB
Power Plant (200' x 150')	6/1		6/1		15/2		15/3

(2) Weapons/sorties operationally required to achieve "over target" requirements shown above:

8/1		8/1		18/2		18/3
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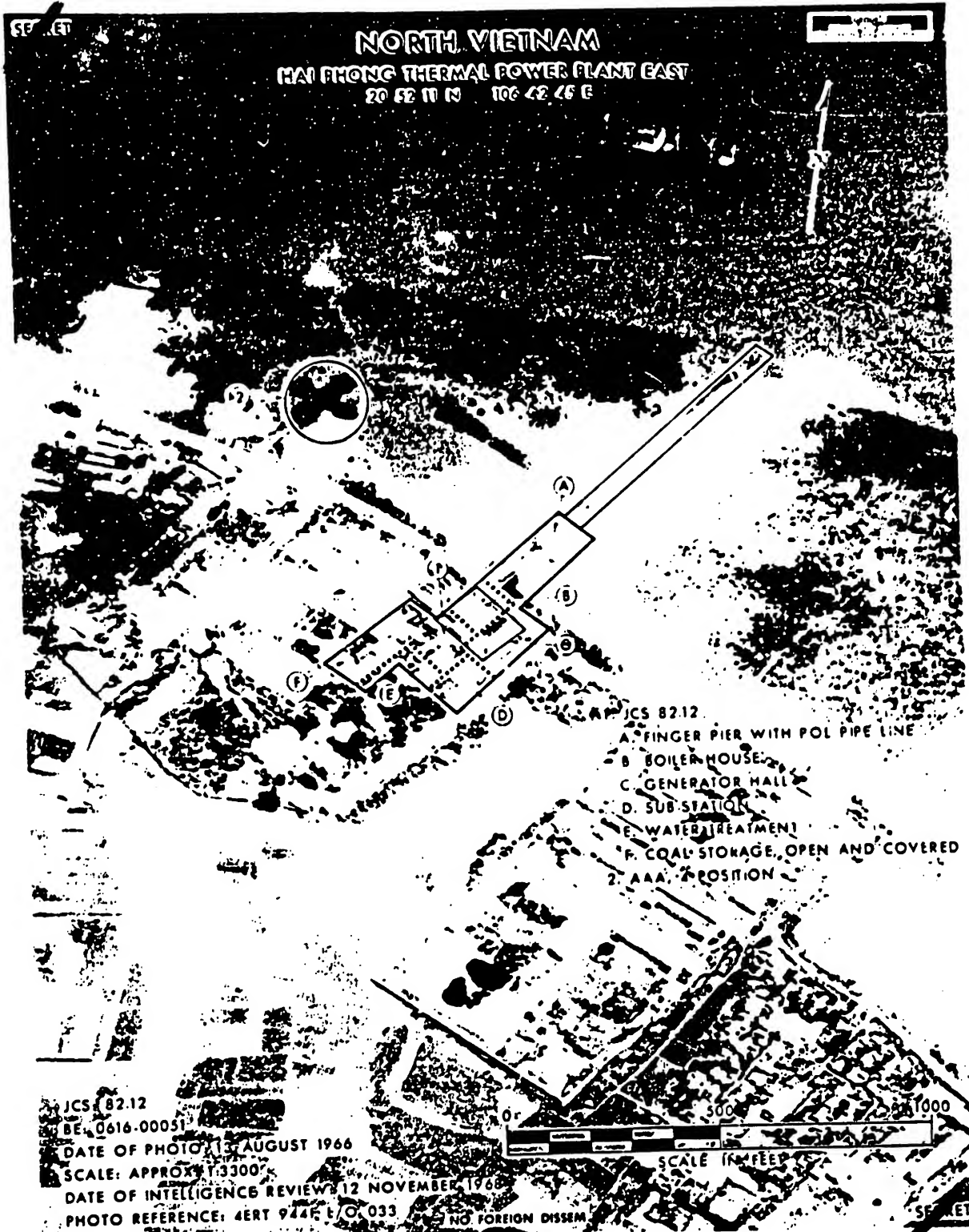
15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%

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TAB K TO ANNEX D TO APPENDIX A

TARGET NO. 82.12



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(Revised by 17th N/H)

A-D-K-1

Tab K to Annex D
to Appendix A

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 82.12 1
2. BE NUMBER: 616-0051 2
3. IDENTIFICATION: Hai Phong Thermal Power Plant East 3
4. DATE OF INFORMATION: 18 July 1968 4
DATE OF TISD: 11 March 1969 5
DATE OF PHOTOGRAPHY: 13 August 1966 6
DATE OF INTELLIGENCE REVIEW: 12 November 1968 7
5. LOCATION: 20-52-11N 106-42-45E, located 1.7 NM E of Hai Phong. 8
9
6. DESCRIPTION: The target area consists of a boiler house 10
(4 boilers) with 2 smokestacks, generator hall containing 3 generators, 11
transformer building, and coal storage yard. The boiler house and 12
generator hall occupy a total area of 210' by 75'. The power plant is 13
served by primary road and finger pier. The target area is approximately 14
3,500' by 1,000'. 15
7. SIGNIFICANCE: The power plant has an installed capacity of 16
7,000 kilowatts, comprising about 5% of the national capacity. The 17
plant is one of two power generating installations in Hai Phong but is 18
the primary supplier of power to the town. The other plant, Hai Phong 19
Thermal Power Plant West (JCS # 80), provides power mainly to the 20
cement plant. 21
8. TARGET ENVIRONMENT: Target is a few feet above sea level 22
and is located on the S bank of the SE flowing Cua Cam (river). 1.7 NM 23
NE of the center of Hai Phong. It is situated on the intensively rice- 24
cultivated Red River Delta plain. The plain is laced with streams, canals, 25
and ditches. Mangrove swamps occupy large sections to the E and N. 26
The Gulf of Tonkin is about 10 NM to the SE. Target is served by a 27
road extending W to Hai Phong. The general target area is sparsely 28
built-up and is primarily industrial. A 480-foot high hill is located 29
4.4 NM NW of the target. 30
9. DEFENSE ENVIRONMENT: 31
- a. The target is within the SAM envelope. 32
- b. AAA activity has been identified within 3NM of the target. 33
- c. HMG and small arms fire is anticipated. 34

~~SECRET~~ NO FOREIGN DISSEM EXCLUDED FROM AUTOMATIC DOWNGRADING

A-D-K-2

(Revised by 17th Note to Holders)

Tab K to
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10. <u>DAMAGE OBJECTIVE:</u> Production loss. Damage criterion is structural damage to power plant buildings with accompanying damage to generators, boilers, transformers, switching, and control equipment, and auxiliary components. Damage level is 70%.	1 2 3 4
11. <u>EFFECT ON NVN:</u> Destruction of the target would eliminate the main power supply to the urban area. Additional supplies are available from the other power plant in Hai Phong (JCS # 80), Hon Gai Thermal Power Plant (JCS # 82.13), and the Uong Bi Thermal Power Plant (JCS # 82).	5 6 7 8 9
12. <u>RECUPERABILITY:</u> Destruction of the power plant structures, boilers, generator units, and transformer would require a period of from 12 to 15 months for restoration. Units now on order for expansion of the plant would be available by this time for replacement of damaged equipment.	10 11 12 13 14
13. <u>COLLATERAL DAMAGE:</u>	15
a. Light damage to surrounding area.	16
b. Population Casualties*	17
Target Area Adjacent Area Target Area Adjacent Area	18
Mil Civ Mil Civ Mil Civ Mil Civ	19
0 140 0 1250 0 7 0 13	20
*Casualties estimated under daylight alert conditions.	21
14. <u>RECOMMENDED WEAPONS AND SORTIES:</u>	22
This target is comprised of 6 areas. One area (including portions of 3 areas) has been delineated for weapons application. Weapons and sorties have been computed for this area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target are also shown:	23 24 25 26 27
(1) In order to achieve the damage level of 70%, weapons/sorties required over target:	28 29
WEAPON 250# 500# 500# 750#	30
<u>SNAKEYE</u> or <u>SNAKEYE</u> or <u>BOMB</u> or <u>BOMB</u>	31
Areas B, C 7/1 7/1 24/3 24/4	32
and F (120' x 95')	
(2) Weapons/sorties operationally required to achieve "over target" requirement shown above:	33 34
9/1 9/1 29/3 29/6	35
15. <u>PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%</u>	36

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A-D-K-3

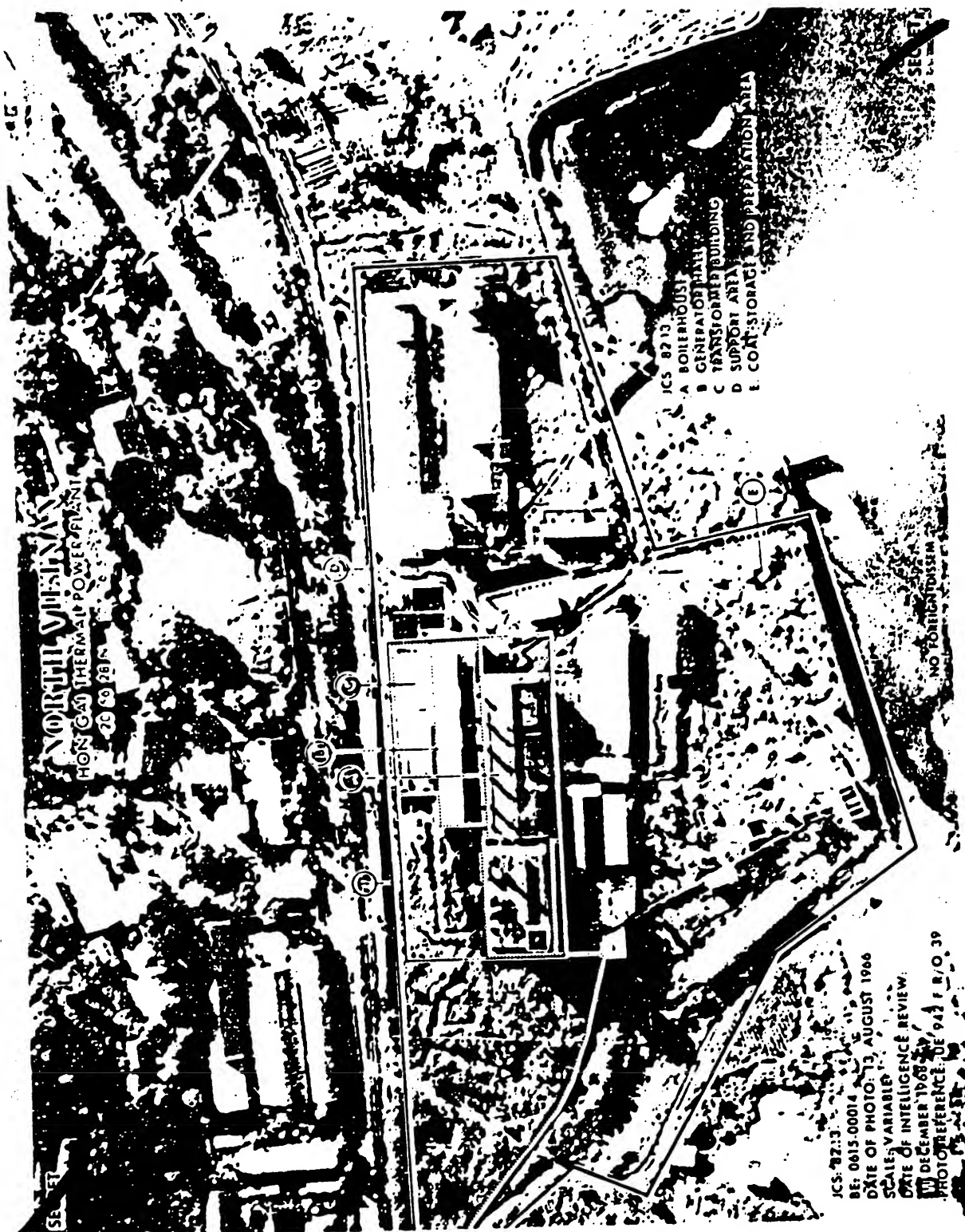
(Revised by 17th Note to Holders)

Tab K to
Annex D to
Appendix A

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TAB L TO ANNEX D TO APPENDIX A

TARGET NO. 82.13



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(Revised by 17th N/H)

A-D-L-1

Tab L to Annex D
to Appendix A

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 82.13
2. REF NUMBER: 615-0014
3. IDENTIFICATION: Hon Gai Thermal Power Plant
4. DATE OF INFORMATION: 10 September 1968
DATE OF TISD: 11 March 1969
DATE OF PHOTOGRAPHY: 13 August 1966
DATE OF INTELLIGENCE REVIEW: 11 December 1968
5. LOCATION: 20-56-28N 107-06-50E, located 2.2 NM ESE of Hon Gai.
6. DESCRIPTION: The target area consists of 2 boiler houses with a total of 8 smokestacks, generator hall, switching and transformer building, 2 coal preparation buildings, pump house, 4 spray ponds, and 4 support buildings. The area is served by rail and secondary road and is approximately 780' x 480'.
7. SIGNIFICANCE: The power plant has an installed capacity of 15,000 kilowatts, comprising about 11% of the national total. It supplies power locally to the town of Hon Gai, the Hon Gai Port Facilities, (JCS #69). The plant also supplies, over a 35 kilovolt transmission line, the Cam Pha Port Facilities (JCS #68), local coal mining, and is an alternate supply source to Hai Phong.
8. TARGET ENVIRONMENT: Target, near sealleve, located 2.2 NM ESE of Hon Gai, on southward projecting broad, forested, hilly peninsula forming the E border of Port Courbet; Hon Gai and target site on E-W trending S coast of peninsula. From Hon Gai, just E of entrance to Port Courbet, E to target area, the narrow mangrove lined coast is backed by forested hills, up to 500' above sea level. About 1.1 NM N of target site in an area of strip-mining, hills are denuded. Onshore, E of target, Chenal De L'Hamelin (Bay extension) is liberally dotted with small, wooded, hilly islands. Open Gulf of Tonkin is about 10 NM NE of target area. A principal road from Hon Gai E along the coast passes just N of target site.
9. DEFENSE ENVIRONMENT:
 - a. The target is not within the SAM envelope.
 - b. AAA activity has been identified within 3 NM of the target.
 - c. HMG and small arms fire is not anticipated.
10. DAMAGE OBJECTIVE: Production loss. Damage criterion is structural damage to power plant buildings with accompanying damage to generators, boilers, transformers, switching and control equipment, and auxiliary components. Expected damage is 70%.

~~SECRET~~ NO FOREIGN DISSEM EXCLUDED FROM AUTOMATIC DOWNGRADING

A-D-L-2

(Revised by 17th Note to Holders)

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Annex D to
Appendix A

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11. EFFECT ON NVN: Destruction of this target would eliminate the only source of power supplying Hon Gai and Cam Pha areas, each containing port facilities used primarily for the shipment of coal. Priority power requirements, including those needed for port operations, will be provided by portable generators available in the NVN.

12. RECUPERABILITY: Restoration of the transformer would require from 9 to 12 months. The power plant can resume partial operation after one year on an emergency basis by utilizing salvaged and repaired equipment. Reconstruction of the plant to full capacity would require from 18 to 24 months.

13. COLLATERAL DAMAGE:

a. Insignificant

b.		Population		Casualties*			
Target Area		Adjacent Area		Target Area		Adjacent Area	
Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ
0	150	0	380	0	6	0	4

*Casualties estimated under daylight alert conditions.

14. RECOMMENDED WEAPONS AND SORTIES:

This installation is comprised of 5 areas. One area (including 3 areas) has been delineated for weapons application. Weapons and sorties have been computed for this area. To show the effort required to achieve the expected damage, total weapons/sorties required over the target are also shown:

(1) In order to achieve the expected damage of 70%, weapons/sorties required over target:

WEAPON	250# SNAKEYE	500# SNAKEYE	500# BOMB	750# BOMB
Areas A,B and C (295' x 145')	5/1	5/1	14/2	14/2

(2) Weapons/sorties operationally required to achieve "over target" requirement shown above:

6/1	6/1	17/2	17/4
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15. PROBABILITY OF ACHIEVING EXPECTED DAMAGE: 50%.

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A-D-L-3

(Revised by 17th Note to Holders)

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Annex D to
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TAB M TO ANNEX D TO APPENDIX A

TARGET NO. 82.14

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(Revised by 14th N/H)

A-D-M-1

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To Appendix A

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 82.14 1
2. BE NUMBER: 616-0153 2
3. IDENTIFICATION: Lao Cai Thermal Power Plant 3
4. DATE OF INFORMATION: 18 October 1967 4
DATE OF TIS: 23 April 1968 5
DATE OF PHOTOGRAPHY: 18 October 1967 6
DATE OF INTELLIGENCE REVIEW: 2 April 1968 7
5. LOCATION: 22-29-37N 103-58-42E 8
6. DESCRIPTION: The target consists of a one-stack, concrete boiler/generator house; transformer yard; coal storage; coal processing building with conveyor; six small POL tanks; pump house; administration building; and support buildings. The target is served by a rail spur and a secondary road. Target area is approximately 800 x 650 feet. 9
10
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12
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14
7. SIGNIFICANCE: This target is one of the larger operating power plants in North Vietnam. It has an installed capacity of 8,000 kw. comprising about 4 per cent of the pre strike national capacity and almost 20 per cent of the current national capacity. It is of local importance, supplying power for Lao Cai and for apatite mining and processing operations in the Lao Cai area. 15
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17
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8. TARGET ENVIRONMENT: Target, about 300 feet above sea level, is located about 0.5 NM SE of Lao Cai, on the NE side of the Red River. Floor of NW-SE trending Red River valley is about 1 NM wide and is bounded by forested hills. Hills extend to forested mountains located 5 NM NE and 2.5 NM SW of target. Rough plain of valley floor contains a railroad which follows NE side of Red River. China border about 1.0 NM NW of target. 21
22
23
24
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26
27
9. DEFENSE ENVIRONMENT: 28
 - a. The target is not within the SAM envelope. 29
 - b. AAA activity has not been identified within 3 NM of the target. 30
31
 - c. HMG and small arms fire is not anticipated. 32
10. DAMAGE OBJECTIVE: Production loss. Damage criterion is structural damage to station buildings with accompanying damage to turbo-generators, boilers, transformers, switching and control equipment, and auxiliary components. Damage level is 70 per cent. 33
34
35
36
37
11. EFFECT ON NVN: Destruction of the target will affect production of apatite which is mined in the Lao Cai area and is used by fertilizer plants throughout North Vietnam. Other effects will be only of local significance. The power plant is not connected to the existing transmission network. 38
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~~SECRET~~ NO FOREIGN DISSEM EXCLUDED FROM AUTOMATIC DOWNGRADING

A-D-M-2
(REVISED BY 14TH NOTE TO HOLDERS)

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Appendix A

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12. RECUPERABILITY: Destruction of the power plant transformers would prevent operation for a period of from nine to twelve months. Major damage to the power plant structures, boilers, or generator units would require a period of from fifteen to twenty-two months for partial restoration and twenty-six months for complete restoration.

13. COLLATERAL DAMAGE:

a. Insignificant

b. Population

Casualties*

Target Area		Adjacent Area		Target Area		Adjacent Area	
Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ
0	180	0	700	0	10	0	7

* Casualties estimated under daylight alert conditions.

14. RECOMMENDED WEAPONS AND SORTIES:

This installation is comprised of seven areas. One area has been delineated for weapons application. Weapons and sorties have been computed for this area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target are also shown:

(1) In order to achieve a damage level of 70%, weapons/sorties required over target:

WEAPON	500# <u>SNAKEYE</u>	750# <u>BOMB</u>
Area A (130 x 150)	5/1	14/2

(2) Weapons/sorties operationally required to achieve "over target" requirement shown above:

6/1 17/3

15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%

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A-D-M-3
(REVISED BY 14TH NOTE TO HOLDERS)

Tab M to
Annex D to
Appendix A



~~SECRET~~

TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 82.15
2. BE NUMBER: 616-0232
3. IDENTIFICATION: Nam Dinh Thermal Power Plant
4. DATE OF INFORMATION: 10 September 1968
DATE OF TIS: 4 November 1968
DATE OF PHOTOGRAPHY: 5 July 1965
DATE OF INTELLIGENCE REVIEW: 4 October 1968
5. LOCATION: 20-25-16N 106-10-45E. Located in the south-central part of Nam Dinh.
6. DESCRIPTION: The target consists of one generator hall, 2 boilerhouses, one coal storage and treatment building and 4 cooling towers.
7. SIGNIFICANCE: The power plant has an installed capacity of 7,500 kilowatts, comprising over 4% of the national total. It supplies power to the city of Nam Dinh and a nearby textile plant.
8. TARGET ENVIRONMENT: Target is a few feet above sea level at the S end of Nam Dinh. It is near the W bank of the NE flowing Nam Dinh Giang (River) which empties into the SE flowing Red River 1.9 to the NE. The area is a flat plain and, with the exception of Nam Dinh town, is intensively cultivated to wetland rice. There are numerous villages. The Gulf of Tonkin is about 18 NM to the SE. Numerous roads radiate from Nam Dinh. Rail lines extend to the NW and SW.
9. DEFENSE ENVIRONMENT:
 - a. The target is within the SAM envelope.
 - b. AAA activity has been identified within 3 NM of the target.
 - c. IIMG and small arms fire is anticipated.
10. DAMAGE OBJECTIVE: Production loss. Damage criterion is structural damage to station buildings with accompanying damage to turbo-generators, boilers, transformers, switching and control equipment, and auxiliary components. Damage level is 70%.
11. EFFECT ON NVN: Destruction of this target would eliminate the only power generating installation located within Nam Dinh. The plant is connected with the Ha Noi Thermal Power Plant (BE number 0616-0016) by 35- and 110-kilovolt transmission lines. However, power could not be supplied from this source without causing shortages in Ha Noi.
12. RECUPERABILITY: Destruction of the power plant transformers would prevent operation for a period of from 9 to 12 months. Major damage to the power plant structures, boilers or generator units would require a period of from 15 to 22 months for partial restoration and 26 months for complete restoration.

~~SECRET~~ NO FOREIGN DISSEM EXCLUDED FROM AUTOMATIC DOWNGRADING

(Revised by 15th Note to Holders)

A-D-N-2

TAB N to
Annex D to
Appendix A

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13. COLLATERAL DAMAGE:

a. Light damage to surrounding area.

b. Population

Casualties*

Target Area		Adjacent Area		Target Area		Adjacent Area	
Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ
0	55	0	3100	0	3	0	31

*Casualties estimated under daylight alert conditions.

14. RECOMMENDED WEAPONS AND SORTIES:

This target is comprised of 4 areas, one of which has been delineated for weapons application. Weapons and sorties have been computed for this area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target are also shown:

(1) In order to achieve a damage level of 70%, weapons/sorties required over target:

WEAPON	250# SNAKEYE	500# SNAKEYE	500# BOMB	750# BOMB
Power Plant (225' x 130')	5/1	5/1	15/2	15/3

(2) Weapons/sorties operationally required to achieve "over target" requirements shown above:

6/1	6/1	18/2	18/3
-----	-----	------	------

15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 82.16 1
2. BE NUMBER: 616-0382 2
3. IDENTIFICATION: Thai Nguyen Thermal Power Plant 3
4. DATE OF INFORMATION: 16 April 1968 4
DATE OF TISD: 5 November 1968 5
DATE OF PHOTOGRAPHY: 6 July 1966 6
DATE OF INTELLIGENCE REVIEW: 16 August 1968 7
5. LOCATION: 21-36-37N 105-49-07E, 1.2 NM NE of Thai Nguyen. 8
6. DESCRIPTION: The target contains a generator hall, boilerhouse 9
with one smokestack, transformer yard and control building, large coal 10
processing building and yard, coal unloading and treatment building, admin- 11
istration building, 2 U/G POL storage tanks plus 5 small POL storage tanks, 12
numerous support buildings, and a large pump/filter house on the adjacent 13
Song Thuong (river). Served by a rail spur. The target area is approximately 14
1,250 by 1,100 feet. 15
7. SIGNIFICANCE: The power plant has an installed capacity of 24,000 16
kilowatts, comprising about 12.5% of the pre-strike national capacity. The 17
plant is a principal component of the National Transmission network, supplying 18
electric power to military and key industrial facilities in the Ha Noi/Hai Phong 19
area and to the Thai Nguyen Iron and Steel Plant (BE 0616-0214) (JCS 76) and 20
representing an alternate source of electricity for the Viet Tri industrial area. 21
8. TARGET ENVIRONMENT: The target is located on the bank of the 22
Song Thuong (river). Surrounding terrain is flat to rolling, rice-cultivated 23
plain. 24
9. DEFENSE ENVIRONMENT: 25
 - a. The target is within the SAM envelope. 26
 - b. AAA activity has been identified within 3 NM of the target. 27
 - c. HMG and small arms fire is anticipated. 28
10. DAMAGE OBJECTIVE: Production loss. Damage criterion is 29
structural damage to the station buildings with accompanying damage to 30
generators, boilers, transformers, switching and control equipment, and 31
auxiliary equipment. Expected damage level is 70%. 32
11. EFFECT ON NVN: Destruction of the target will eliminate one 33
of the principal sources of electric power, significantly reducing the total 34
supply available to military and key industrial installations in the Ha Noi/ 35
Hai Phong, Thai Nguyen, and Viet Tri areas. 36

~~SECRET~~ NO FOREIGN DISSEM EXCLUDED FROM AUTOMATIC DOWNGRADING

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12. RECUPERABILITY: Destruction of the transformer yard would prevent operation for a period from 9 to 12 months. Major damage to the power plant structures, boilers, and generators would require a period of from 9 to 12 months for partial restoration by utilizing salvaged or repaired equipment. Reconstruction to full capacity could be accomplished in about 26 months.

13. COLLATERAL DAMAGE:

a. Insignificant

Population				Casualties*			
Target Area		Adjacent Area		Target Area		Adjacent Area	
Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ
0	150	0	230	0	9	0	2

*Casualties estimated under daylight alert conditions.

14. RECOMMENDED WEAPONS AND SORTIES:

The target is comprised of 8 areas. One area (covering 3 component areas) has been delineated for weapons application. Weapons and sorties have been computed for this area. To show the effort required to achieve the expected damage, total weapons/sorties required over the target are also shown:

(1) In order to achieve an expected damage of 70%, weapons/sorties required over target:

WEAPON	250#	500#	500#	750#
	SNAKEYE	or SNAKEYE	or BOMB	or BOMB
Areas C, D, G (380x220)	7/1	7/1	14/2	14/2

(2) Weapons/sorties operationally required to achieve "over target" requirement shown above:

9/1	9/1	17/2	17/3
-----	-----	------	------

15. PROBABILITY OF ACHIEVING EXPECTED DAMAGE: 50%

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82.16

(Revised by 15th Note to Holders)

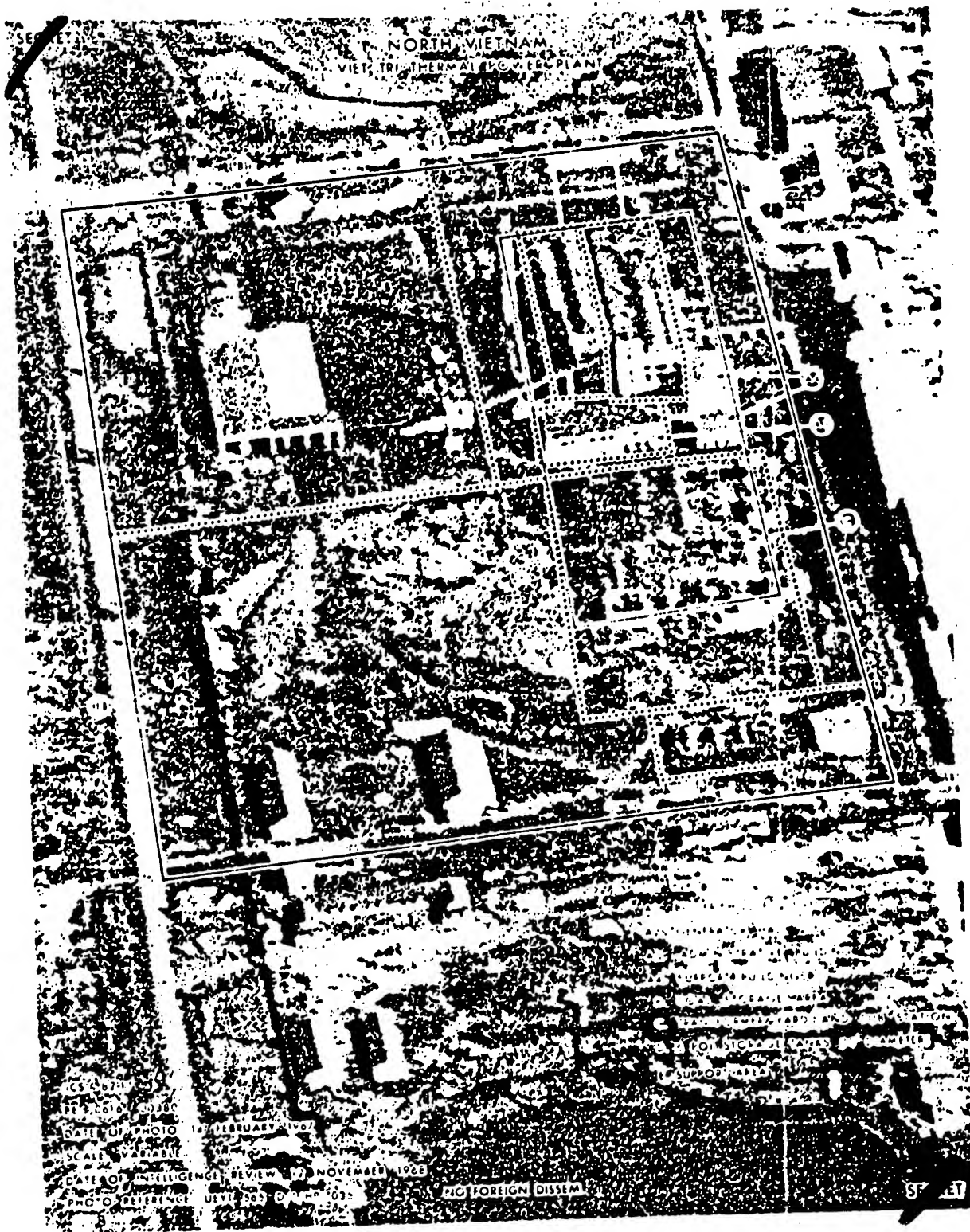
A-D-0-3

TAB O to
Annex D to
Appendix A

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TAB P-1 ALPHA 1 T APRENTIX



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A-L-F-1

PHOTO REFERENCE

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 82.17
2. BE NUMBER: 616-0380
3. IDENTIFICATION: Viet Tri Thermal Power Plant
4. DATE OF INFORMATION: 10 September 1968
DATE OF TISD: 23 January 1969
DATE OF PHOTOGRAPHY: 14 February 1967
DATE OF INTELLIGENCE REVIEW: 12 November 1968
5. LOCATION: 21-17-57N 105-25-26E, located 30 NM NW of Ha Noi.
6. DESCRIPTION: The target area consists of a boiler house with one smokestack, generator hall with 2 generating units, a probable substation, transformer and switching yard, 6 POL storage tanks (10' diameter), a coal delivery building, a coal treatment house, numerous support buildings, a coal storage area and what appears to be pipes and construction materials.
7. SIGNIFICANCE: The power plant has an installed capacity of 16,000 kilowatts, comprising about 9% of the national capacity. It is scheduled to be expanded to 24,000 kilowatts. The plant supplies power to the Viet Tri industrial area, which includes the Viet Tri Chemical Plant (BE Number 616-036) (JCS #75) and is connected to other main power plants in the country by a 110-kilovolt transmission line, through a major substation (Ha Noi Transformer Station Dong Anh, BE Number 616-0545) located about ten NM N of Ha Noi.
8. TARGET ENVIRONMENT: The target is located in the western outskirts of Viet Tri and is situated on low flat ground at an elevation of about 50 feet. The power plant is a part of an industrial complex, consisting of a number of chemical processing plants. There are no terrain obstructions close to the target area.
9. DEFENSE ENVIRONMENT:
 - a. The target is within the SAM envelope.
 - b. AAA activity has been identified within 5 NM of the target.
 - c. HMG and small arms fire is anticipated.
10. DAMAGE OBJECTIVE: Production loss. Damage criterion is structural damage to power plant buildings with accompanying damage to generators, boilers, transformers, switching and control equipment, and auxiliary components. Damage level is 70%.
11. EFFECT ON NVN: Destruction of the target will disrupt electric power supplies to the Viet Tri Industrial Complex. Although alternate electric power could be obtained by the 110-kv network from other power plants, this would adversely affect other important power consumers including Ha Noi.

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A-D-P-2

(Revised by 16th Note to Holders)

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12. RECUPERABILITY: Restoration of the transformer station would require from 9 to 12 months. The power plant can resume partial operation after one year on an emergency basis by utilizing salvaged and repaired equipment. Reconstruction of the plant to full present capacity could be accomplished in about 18 months using equipment probably currently on order.

13. COLLATERAL DAMAGE:

a. Insignificant

Population				Casualties*			
Target Area		Adjacent Area		Target Area		Adjacent Area	
Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ
0	175	0	300	0	8	0	3

*Casualties estimated under daylight alert conditions.

14. RECOMMENDED WEAPONS AND SORTIES:

This target is comprised of 5 areas. One area (which includes portions of 2 target areas) has been delineated for weapons application. Weapons and sorties have been computed for this area. To show the effort required to achieve the expected damage, total weapons/sorties required over the target are also shown:

(1) In order to achieve a damage level of 70%, weapons/sorties required over target:

WEAPON	250# SNAKEYE	or	500# SNAKEYE	or	500# BOMB	or	750# BOMB
Areas A & C (675' x 220')	11/1		11/1		20/2		20/3

(2) Weapons/sorties operationally required to achieve "over target" requirement shown above:

14/1	14/2	24/3	24/4
------	------	------	------

15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%.

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A-D-P-3

(Revised by 16th Note to Holders)

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Appendix A

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TAB Q TO ANNEX D TO APPENDIX A

TARGET NO. 82.18

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S 82.18
0617 00870
DATE OF PHOTO 18 JAN 65
SCALE 1:9,800 (OBLIQUE)
DATE OF INTELLIGENCE REVIEW 3 APRIL 65
PHOTO REF DOUG 3 (MOD) 91 0479

NO FOREIGN DISSEM

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A-D-Q-1

Tab Q to Annex D
to Appendix A

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 82.18 1
2. BE NUMBER: 617-0870 2
3. IDENTIFICATION: Co Dinh Thermal Power Plant 3
4. DATE OF INFORMATION: 3 April 1965 4
DATE OF TIS: 4 April 1965 5
5. LOCATION: 19-44-05N/105-37-38E, UTM WG 655819 6
6. DESCRIPTION: The target area is composed of a generator hall, boiler house with one smokestack, transformer yard, and cooling tower. 7
8
9
7. SIGNIFICANCE: This power plant has an installed capacity of 1,500 kilowatts, comprising about 0.9 percent of the national capacity. It supplies power for the local chromite mining operations. It is connected with the Thanh Hoa power plant (BE Number 0617-0533) by a 35-kilovolt transmission line. 10
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8. TARGET ENVIRONMENT: The target is located about 20 feet above sea level, about 11 NM southwest of Thanh Hoa. Surrounding area is flat cultivated plain in all directions except for the wooded hills in the southwest. These hills rise to about 1,700 feet above sea level and form physical obstruction. 16
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9. DEFENSE ENVIRONMENT: No known AAA defenses are located in the immediate vicinity of the target. Nearest AAA is in the Thanh Hoa area, 8.5 NM east-northeast and includes 7 active sites (24 occupied 14.5mm-37mm positions) and one inactive 4-position site. Nearest EW radar is also located at Thanh Hoa, and the area is within the GCI capability of Hanoi EW/HP radar. The 269th Independent Inf Regiment has been sometimes reported in the Thanh Hoa area as has the 57th Inf Regiment of the 304th Division. Security forces and armed militia may be encountered in the target area. 22
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10. DAMAGE OBJECTIVE: Production loss. Damage criterion is structural damage to power plant buildings with accompanying damage to generators, boilers, transformers, switching and control equipment and auxiliary equipment. Damage level is 70 percent. 32
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11. EFFECT ON DRV: Destruction of this target will deprive local chromite mines of their power supply. Alternate power could be obtained from the Thanh Hoa Power Plant (BE Number 0617-0533) but this would adversely affect power supply of Thanh Hoa. 37
38
39
40
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12. RECUPERABILITY: Destruction of the power plant transformers would prevent operation for a period from five to nine months. Major damage to power plant structures, boilers, or generators would require a period of about 12 months for partial restoration and about 15 months for complete reconstruction. 42
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A-D-Q-2

Tab Q to
Annex D to
Appendix A

~~TOP SECRET~~

13. COLLATERAL DAMAGE: Insignificant. 1
14. RECOMMENDED WEAPONS AND SORTIES: 2
- a. In order to achieve the desired damage level of 70%, weapons/sorties required over target: 3
- | Weapon | 250#
<u>SNAKEYE</u> | or | 250#
<u>BOMB</u> | or | 500#
<u>BOMB</u> | or | 750#
<u>BOMB</u> |
|--------|------------------------|----|---------------------|----|---------------------|----|---------------------|
| | 7/1 | | 18/2 | | 18/2 | | 18/3 |
- 5
- b. Weapons/sorties operationally required to achieve "over target" requirements shown above: 6
- | | | | |
|------|------|------|------|
| 11/1 | 22/3 | 22/3 | 22/4 |
|------|------|------|------|
- 7
- 8
15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50% 9

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Tab Q to
Annex D to
Appendix A

(Revised by 7th Note to Holders)

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TAB R TO ANNEX D TO APPENDIX A

TARGET NO. 82.19

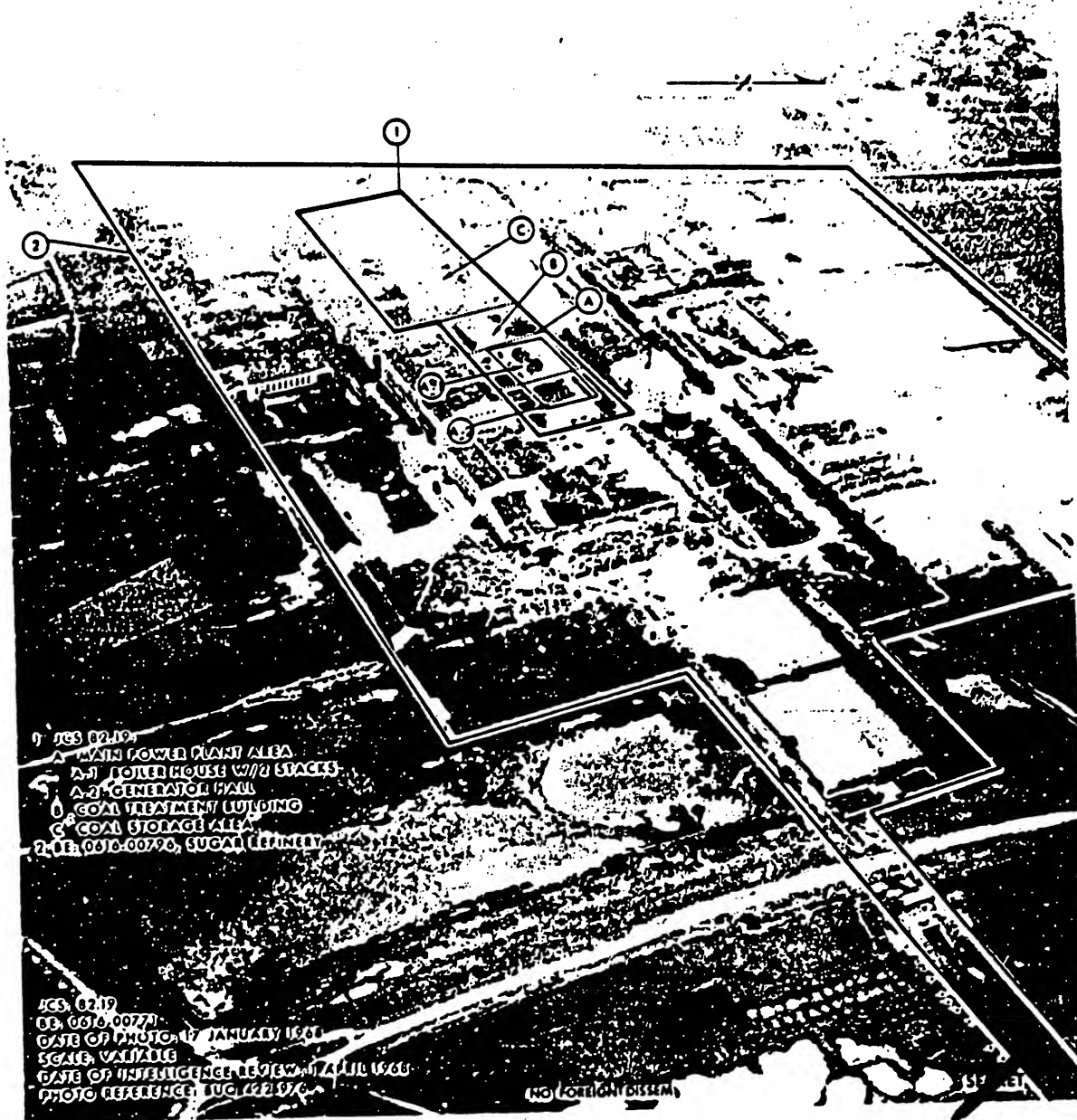
NORTH VIETNAM

PHU LY THERMAL POWER PLANT

SUGAR REFINERY VAN DIEM

20 47 00 N 105 55 15 E

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(Revised by 14th N/H)

A-D-R-1

Tab R To Annex D
To Appendix A

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 82.19 1
2. BE NUMBER: 616-0771 2
3. IDENTIFICATION: Phu Ly Thermal Power Plant Sugar Refinery Van Diem 3
4. DATE OF INFORMATION: 10 June 1967 4
DATE OF TIS: 23 April 1968 5
DATE OF PHOTOGRAPHY: 17 January 1968 6
DATE OF INTELLIGENCE REVIEW: 1 April 1968 7
5. LOCATION: 20-47-00N 105-55-15E 8
6. DESCRIPTION: The target is located within the Van Diem Sugar Refinery and contains a boiler house with two smokestacks, generator hall, coal storage area, coal treatment building, and supporting buildings. The power plant is served by rail and primary road. The target area is approximately 1,500 feet by 680 feet. 9
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7. SIGNIFICANCE: The power plant has an installed capacity of 1,200 kilowatts, comprising slightly less than one percent of the pre strike national capacity and 3 percent of the current national capacity. It supplies power to a local sugar refinery. 15
16
17
18
8. TARGET ENVIRONMENT: The target is located on a flat plain about one-half NM southwest of the Red River and about one and one-half NM east of a main north-south rail line. In the vicinity of the target are small built-up areas, the closest being about one-quarter NM to the south. 19
20
21
22
23
9. DEFENSE ENVIRONMENT: 24
 - a. The target is within the SAM envelope. 25
 - b. AAA activity has been identified within 3 NM of the target. 26
27
 - c. HMG and small arms fire is anticipated 28
10. DAMAGE OBJECTIVE: Production loss. Damage criterion is structural damage to power plant buildings with accompanying damage to generators, boilers, transformers, switching and control equipment, and auxiliary components. Damage level is 70 percent. 29
30
31
32
33
11. EFFECT ON NVN: Destruction of this target would eliminate the only power supply available to the sugar refinery. 34
35
12. RECUPERABILITY: Major damage to the power plant structures, boilers, or generator units would require a period of about 12 months for partial restoration and about 15 months for complete restoration. 36
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NO FOREIGN DISSEM EXCLUDED FROM AUTOMATIC DOWNGRADING

A-D-R-2
(REVISED BY 14TH NOTE TO HOLDERS)

Tab R to
Annex D to
Appendix A

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13. COLLATERAL DAMAGE:

a. Insignificant

b. Population

Casualties*

Target Area		Adjacent Area		Target Area		Adjacent Area	
Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ
0	160	0	400	0	8	0	4

* Casualties estimated under daylight alert conditions.

14. RECOMMENDED WEAPONS AND SORTIES:

This target is comprised of three areas. One area has been delineated for weapons application. Weapons and sorties have been computed for this area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target are also shown:

(1) In order to achieve a damage level of 70%, weapons/sorties required over target:

WEAPON	500# <u>SNAKEYE</u>	750# <u>BOMB</u>
Area A (65 x 230)	6/1	21/3

(2) Weapons/sorties operationally required to achieve "over target" requirement shown above:

7/1 25/4

15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%

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A-D-R-3
(REVISED BY 14TH NOTE TO HOLDERS)

Tab R to
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Appendix A

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 82.21 1
2. B. E. NUMBER: 617-0869 2
3. IDENTIFICATION: Ban Thach Hydroelectric Power Plant 3
4. DATE OF INFORMATION: 10 September 1968 4
DATE OF TISD: 12 November 1968 5
DATE OF PHOTOGRAPHY: 2 August 1965 6
DATE OF INTELLIGENCE REVIEW: 9 October 1968 7
5. LOCATION: 19-54-25N 105-31-50E, located 15 NM NW of Thanh Hoa. 8
9
6. DESCRIPTION: The target is a reinforced concrete power plant consisting of two generating units at the N end of the dam and transformer and support buildings on the N bank of the canal. A navigational lock (JCS 71.19) is on the S end of the dam. 10
11
12
13
7. SIGNIFICANCE: This is a locally important power plant and has an installed capacity of 1,000 kilowatts. It supplies power to pumping stations serving irrigation. It also provides the Thanh Hoa urban area with additional power by a low voltage transmission line. 14
15
16
17
8. TARGET ENVIRONMENT: The target is located along the Song Giang Canal on the flat cultivated plain about 30 feet above sea level, and about 16NM WNW of Thanh Hoa. There are no physical obstructions in the target area. 18
19
20
21
9. DAMAGE ENVIRONMENT: 22
 - a. The target is within the SAM envelope. 23
 - b. AAA activity has been identified within 3NM of the target. 24
 - c. HMG and small arms fire is anticipated. 25
10. DAMAGE OBJECTIVE: Production loss. Damage criterion is structural damage to the station buildings with accompanying damage to generators, boilers, transformers, switching and control equipment, and auxiliary equipment. Damage level is 70 percent. 26
27
28
29
11. EFFECT ON NVN: Destruction of this target will have an effect on the local agricultural production by depriving irrigation pumping stations of power. Alternate power could be obtained from the Thanh Hoa Power Plant (BE 617-0533) but this would adversely affect power supply of Thanh Hoa. 30
31
32
33
34
12. RECUPERABILITY: Reconstruction of this power plant would require rebuilding of a dam, in addition to the powerhouse and generating equipment, and would require from 24 to 30 months to accomplish. 35
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37

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~~NO FOREIGN DISSEM~~

EXCLUDED FROM AUTOMATIC
REGRADING; DOD DIR 5200.10
DOES NOT APPLY

(Revised by 15th Note to Holders)

A-D-T-2

TAB T to
Annex D to
Appendix A

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13. COLLATERAL DAMAGE:

a. Light damage to surrounding area.

b. Population

Casualties*

Target Area		Adjacent Area		Target Area		Adjacent Area	
Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ

0	55	0	300	0	3	0	3
---	----	---	-----	---	---	---	---

*Casualties estimated under daylight alert conditions.

14. RECOMMENDED WEAPONS AND SORTIES:

This target consists of one area, which has been delineated for weapons application. Weapons and sorties have been computed. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over target are also shown:

(1) In order to achieve a damage level of 70%, weapons/sorties required over target:

Weapons:	250#	500#	500#	750#
	<u>SNAKEYE</u>	or <u>SNAKEYE</u>	or <u>BOMB</u>	or <u>BOMB</u>
Power Plt (1560' x 610')	39/3	39/4	48/5	48/8

(2) Weapons/Sorties operationally required to achieve "over target" requirements shown above:

47/4	47/5	58/6	58/10
------	------	------	-------

15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%

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2

#82.21

(Revised by 15th Note to Holders)

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TAB U TO ANNEX D TO APPENDIX A

TARGET NO. 82.22



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(Revised by 12th N/H)

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Tab U To Annex D
To Appendix A

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 82.22 1
2. BE NUMBER: 616-0764 2
3. IDENTIFICATION: Ta Sa Hydroelectric Power Plant 3
4. DATE OF INFORMATION: 21 August 1967 4
DATE OF TIS: 2 February 1968 5
DATE OF PHOTOGRAPHY: 21 August 1967 6
DATE OF INTELLIGENCE REVIEW: 15 November 1967 7
5. LOCATION: 22-39-44N 106-03-00E 8
6. DESCRIPTION: The target consists of a separated power-
house and dam connected by a canal. Water is conveyed to the
powerhouse by a penstock. 9
10
11
7. SIGNIFICANCE: The power plant has an installed capacity
of 1,000 Kilowatts, comprising 0.5% of national capacity, and
supplies power for local tin mining operations. 12
13
14
8. TARGET ENVIRONMENT: Target, 360 ft. above sea level, is
on W side of N-flowing Song De Nguyen Binh, at W edge of very
small, rice-cultivated basin enclosed by hills. Hills wooded,
except to S and SW of target, where grass and brush predominate;
peaks generally 440 ft. higher than basin, slopes are 30-40%.
The area is sparsely populated. The target site is located 17
NM from the China Border. 15
16
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21
9. DEFENSE ENVIRONMENT: 22
 - a. The target is not within the SAM envelope. 23
 - b. AAA activity has not been identified within 3 NM or
the target. 24
25
 - c. Light machine gun and small arms fire is anticipated. 26
10. DAMAGE OBJECTIVE: Production loss. Damage criterion is
structural damage to powerhouse with accompanying damage to
generators; transformers, switching and control equipment, and
auxiliary components. Damage level is 70%. 27
28
29
30
11. EFFECT ON NVN: Destruction of this target would elimin-
ate about one-fourth of the electric power supplied for re-
gional tin mining, but would have only a minor effect except
in combination with destruction of Ta Sa Hydroelectric Power
Plant, Na Ngan (JCS 82.23). These two power plants together
supply about three-fourths of the power utilized in the tin
mining operations. 31
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A-D-U-2

Tab U to
Annex D to
Appendix A

(Revised by 12th Note to Holders)

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12. RECUPERABILITY: Reconstruction of this target would require rebuilding of the powerhouse and installation of generating equipment and would take from six to nine months.

13. COLLATERAL DAMAGE:

a. None

b. Population Casualties*

Target Area Adjacent Area Target Area Adjacent Area

Mil Civ Mil Civ Mil Civ Mil Civ

0 20 0 0 0 1 0 0

*Casualties estimated under daylight alert conditions.

14. RECOMMENDED WEAPONS AND SORTIES:

This installation is comprised of two areas. One area has been delineated for weapons application. Weapons and sorties have been computed for this area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target are also shown:

(1) In order to achieve a damage level of 70%, weapons/sorties required over target:

WEAPON	250#	250#	500#	750#
	SNAKEYE	or BOMB	or BOMB	or BOMB
Area A (75x200)	5/1	19/2	19/2	19/3

(2) Weapons/sorties operationally required to achieve "over target" requirement shown above:

6/1	23/2	23/3	23/4
-----	------	------	------

15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%

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A-D-U-3

Tab U to
Annex D to
Appendix A

(Revised by 12th Note to Holders)

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TAB V TO ANNEX D TO APPENDIX A

TARGET NO. 82.23



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(Revised by 12th N/H)

A-D-V-1

Tab V To Annex D
To Appendix A

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 82.23 1
2. BE NUMBER: 616-0765 2
3. IDENTIFICATION: Ta Sa Hydroelectric Power Plant Na Ngan 3
4. DATE OF INFORMATION: 21 August 1967 4
DATE OF TIS: 2 February 1968 5
DATE OF PHOTOGRAPHY: 21 August 1967 6
DATE OF INTELLIGENCE REVIEW: 15 November 1967 7
5. LOCATION: 22-41-55N 106-03-17E 8
6. DESCRIPTION: The target area consists of a separated powerhouse and dam connected by a canal. Water is conveyed to the powerhouse by a penstock. 9
10
11
7. SIGNIFICANCE: The power plant has an installed capacity of 2,000 kilowatts, comprising 1% of national capacity. 12
13
8. TARGET ENVIRONMENT: Target, 300 ft. above sea level, is on west side of the N-flowing Song De Nguyen Binh, in a rice-cultivated basin enclosed by steep, wooded hills. The basin is .2 to .4 NM wide and extends 1.6 NM along Song De Nguyen Binh; surrounding hills rise 160 to 560 ft. above basin. Highest peak is 982 ft. above sea level, 5 NM S of target. The target site is located 15 NM from the China border. 14
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9. DEFENSE ENVIRONMENT: 21
 - a. The target is not within the SAM envelope. 22
 - b. AAA activity has not been identified within 3 NM of the target. 23
24
 - c. Light machine gun and small arms fire is anticipated. 25
10. DAMAGE OBJECTIVE: Production loss. Damage criterion is structural damage to powerhouse with accompanying damage to generators, transformers, switching and control equipment, and auxiliary components. Damage level is 70%. 26
27
28
29
11. EFFECT ON NVN: Destruction of this target would eliminate about one-half of the electric power supplied for regional tin mining, but would have only a limited effect except in combination with destruction of Ta Sa Hydroelectric Power Plant (JCS 82.22). These two plants together supply about three-fourths of the power utilized in the tin mining operations. 30
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A-D-V-2

Tab V to
Annex D to
Appendix A

(Revised by 12th Note to Holders)

~~SECRET~~

12. RECUPERABILITY: Reconstruction of this target would require rebuilding of the powerhouse and installation of generating equipment, and would take from 12 to 18 months.

13. COLLATERAL DAMAGE:

a. None

b. Population

Casualties*

Target Area		Adjacent Area		Target Area		Adjacent Area	
Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ

0	20	0	0	0	1	0	0
---	----	---	---	---	---	---	---

*Casualties estimated under daylight alert conditions.

14. RECOMMENDED WEAPONS AND SORTIES:

This installation is comprised of two areas. One area has been delineated for weapons application. Weapons and sorties have been computed for this area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target are also shown:

(1) In order to achieve a damage level of 70%, weapons sorties required over target:

WEAPON	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	750# BOMB
Area A (75x200)	5/1		19/2		19/2		19/3

(2) Weapons/sorties operationally required to achieve "over target" requirements shown above:

6/1	23/2	23/3	23/4
-----	------	------	------

15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%

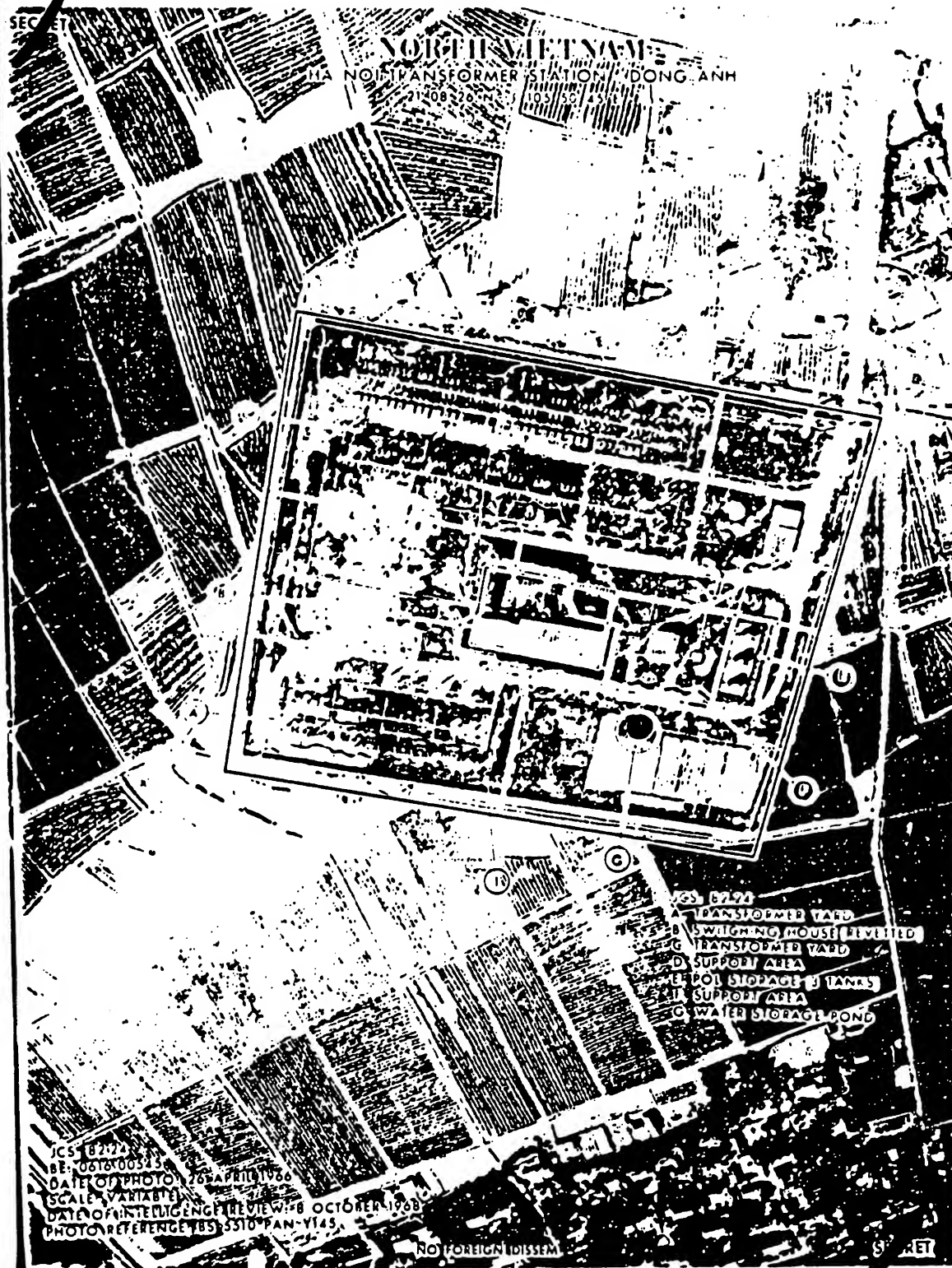
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A-D-V-3

Tab V to
Annex D to
Appendix A

(Revised by 12th Note to Holders)

TARGET NO. 82.24



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(Revised by 17th N/H)

A-D-W-1

Tab W to Annex D
to Appendix A

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TARGET INFORMATION AND STRIKE DATA.

1. TARGET NUMBER: 82.24 1
2. BE NUMBER: 616-0545 2
3. IDENTIFICATION: Ha Noi Transformer Station Dong Anh 3
4. DATE OF INFORMATION: 10 September 1968 4
DATE OF TISD: 11 March 1969 5
DATE OF PHOTOGRAPHY: 26 April 1966 6
DATE OF INTELLIGENCE REVIEW: 8 October 1968 7
5. LOCATION: 21-08-26N 105-50-45E, located 7 NM N of Ha Noi, 3 NM NNE of Red River. 8
9
6. DESCRIPTION: The target is a 110/35 kv transformer and switching station. The area is rectangular in shape and contains a 6,624 square foot revetted switching house (B), two large transformer yards (A and C), one water storage pond (G), three revetted POL tanks (E), and at least two support buildings (D & F). Area is served by secondary road. 10
11
12
13
14
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7. SIGNIFICANCE: This target is the largest transformer and switching station in NVN. It is the main junction point for most principal transmission lines in the NVN network. The installation is vital for any exchanges of power between the major industrial areas in the country. Its main function is to supply alternate and peak load power to the Ha Noi area from the Thai Nguyen TPP (JCS #82.16) and the Viet Tri TPP (JCS #82.17). 16
17
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8. TARGET ENVIRONMENT: Target, about 30' above sea level, is located on a broad flat plain which extends for more than 10 NM from the target in all directions. A N-S highway is located 0.15 NM E of the target and an irregularly-shaped lake, about 2.5 NM long and 0.2 NM wide, is located 2.0 NM W of target. A main railroad line passes about 1 NM to the NE of the target. There are no physical obstructions in the target area. 23
24
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9. DEFENSE ENVIRONMENT: 30
 - a. The target is located within the SAM envelope. 31
 - b. AAA activity has been identified within 3 NM of the target. 32
 - c. HMG and small arms fire is anticipated. 33
10. DAMAGE OBJECTIVE: Loss of power. Damage criterion is structural damage to transformers, switching and control equipment, and auxiliary components. Damage level is 70%. 34
35
36
11. EFFECT ON NVN: Destruction of this target would eliminate the only source of alternate and additional power to the city of Ha Noi. It would also destroy the transmission network of the country, thus preventing any exchange of power between the industrial areas. 37
38
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40
41

~~SECRET~~ NO FOREIGN DISSEM EXCLUDED FROM AUTOMATIC DOWNGRADING

A-D-W-2

(Revised by 17th Note to Holders)

Tab W to
Annex D to
Appendix A

80X

~~SECRET~~

TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 82.25
2. BE NUMBER: 616-0703
3. IDENTIFICATION: Lang Chi Hydroelectric Power Plant Thac Ba
4. DATE OF INFORMATION: 3 January 1968
DATE OF TIS: 25 April 1968
DATE OF PHOTOGRAPHY: 31 July 1967
DATE OF INTELLIGENCE REVIEW: 28 March 1968
5. LOCATION: 21-44-42N 105-01-34E
6. DESCRIPTION: The target, which is under construction on the Song Chay (River), consists of a main concrete spillway dam and an adjacent powerhouse section. The following parts of the project are in the advanced stages of construction: concrete intake and spillway sections of the dam, generator hall with three turbine bays, tailrace, forebay with concrete abutments, injection apron, and earth-fill extension of dam. Initial preparations are underway for building of the main dam spanning the Song Chay.
7. SIGNIFICANCE: The power plant is the country's largest and most important electric power project. It is being constructed with equipment and technical personnel furnished by the Soviet Union. Its planned capacity of 109,500 kw is almost equivalent to three-fourths of the pre strike national capacity. This installation is to supply a significant quantity of electric power to the Ha Noi/Hai Phong area and will supply electricity for industrial development in the northwestern part of the country. The project is designed as a multipurpose structure and, in addition to production of electric power, will function for improvement of irrigation and navigation and for flood control. Acceleration of construction activity could result in partial operation at one-third of planned capacity by the end of 1968.
8. TARGET ENVIRONMENT: Target, about 100 ft. above sea level, is 25 NM NW of Phu Tho, 62.5 NM NW of Ha Noi. It is in the valley of the 600 ft. - wide, SE-flowing Song Chay, on the SE side of the river. Target is among small, forested hillocks which rise 300 ft. above the flat, narrow, rice-cultivated areas which separate them. A forested hill one NM E of target peaks at 1060 ft. above sea level, and another 2.3 NM N of the target reaches 1670 ft. elevation. Rugged, forested mountains are located 5 NM NE of target and extend northward. Roads parallel each side of the Song Chay.
9. DEFENSE ENVIRONMENT:
 - a. The target is within the SAM envelope.
 - b. AAA activity has been identified within 3 NM of the target.
 - c. HMG and small arms fire is not anticipated.
10. DAMAGE OBJECTIVE: Damage criterion is structural damage to the turbine bays of the generator hall. Damage level is 70 percent.

~~SECRET~~ NO FOREIGN DISSEM EXCLUDED FROM AUTOMATIC DOWNGRADING

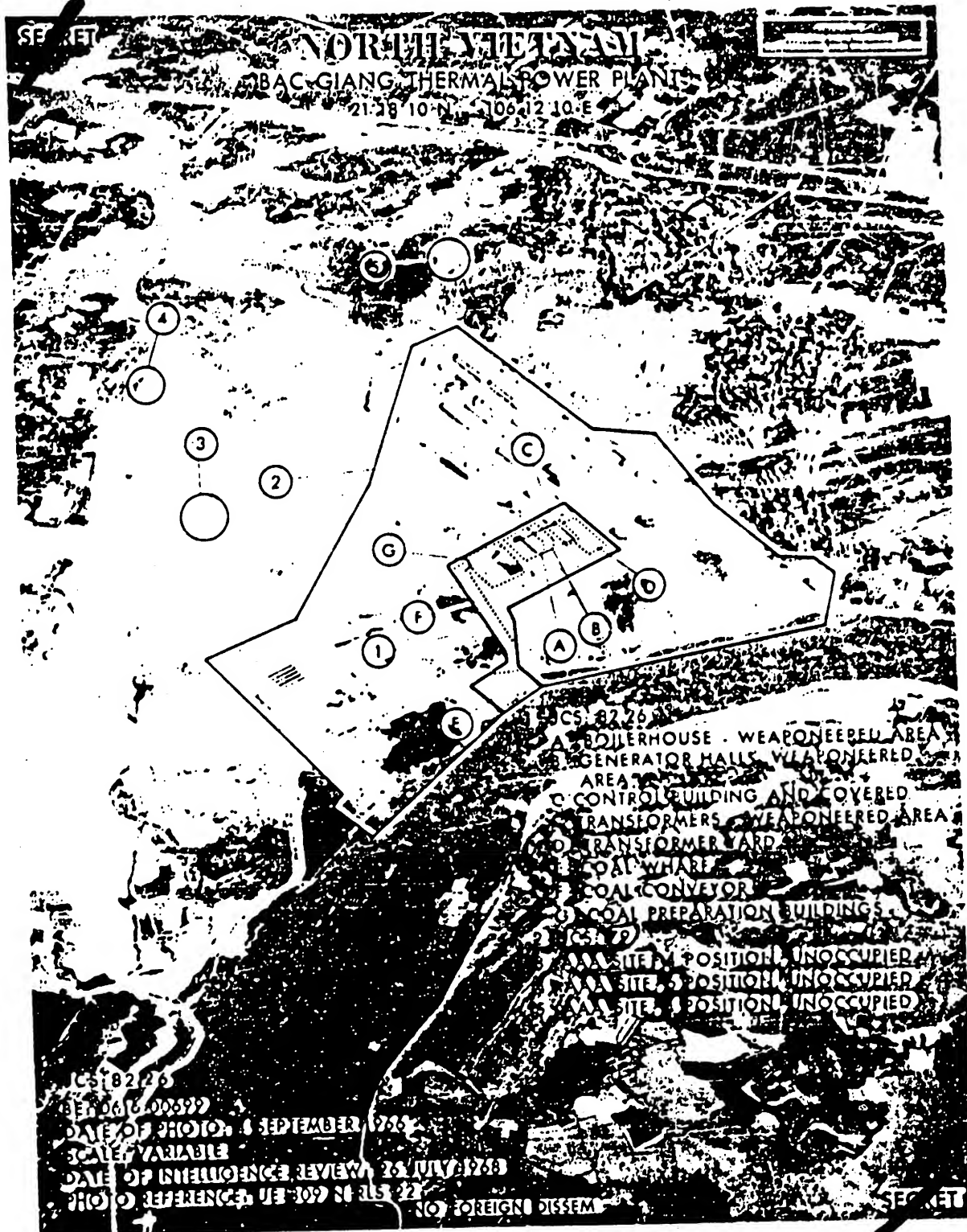
A-D-X-2
(REVISED BY 14TH NOTE TO HOLDERS)

Tab X to
Annex D to
Appendix A

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TAB Y TO ANNEX D TO APPENDIX A

TARGET NO. 82.26



~~SECRET~~
Revised by 17h N/H)

A-D-Y-1

Tab Y to Annex D
to Appendix A

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Weapon	250# <u>SNAKEYE</u>	or	250# <u>BULLPUP</u>	or	250# <u>BOMB</u>	or	500# <u>BOMB</u>	or	750# <u>BOMB</u>	
Area A-1 (100x200)	4/1		2/1		11/1		7/1		6/1	1
Area B (150x250)	16/1		11/6		39/3		20/2		12/2	2
Totals	20/2		13/7		50/4		27/3		18/3	3

(2) Weapons/Sorties operationally required to achieve "over target" requirements shown above:

24/2	16/8	61/6	33/4	22/4	6
------	------	------	------	------	---

(3) In order to achieve a damage level of 70%, weapons/sorties required over target:

Weapon	250# <u>SNAKEYE</u>	or	250# <u>BULLPUP</u>	or	250# <u>BOMB</u>	or	500# <u>BOMB</u>	or	750# <u>BOMB</u>	
Area A-1	14/1		7/4		37/3		24/3		21/3	9
Area B	54/5		37/18		132/11		68/7		41/7	10
Totals	68/6		44/22		169/14		92/10		62/10	11

(4) Weapons/Sorties operationally required to achieve "over target" requirements shown above:

83/7	54/27	206/18	112/13	76/13	14
------	-------	--------	--------	-------	----

15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%. 15

~~SECRET~~ NO FOREIGN

#66

A-C-BW-4

Tab BW to
Annex C to
Appendix A

(Revised by 13th Note to Holders)

659

LAB BWA TO ANNEX C TO APPENDIX A

TARGET NO. 661

~~SECRET~~



ICS 661
REF 6616 00388
DATE OF PHOTO: 18 OCTOBER 1967
SCALE 1:6,543 (APPROX)
DATE OF INTELLIGENCE REVIEW: 10 JANUARY 1968
PHOTO REFERENCE: BX 6729 734

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CLASSIFIED BY 1505 N/ID

A.C.-BWA-1

Lab BWA To
Annex C To Appendix A

~~SECRET~~

TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 66.1 1
2. B. E. NUMBER: 0616-0888 2
3. IDENTIFICATION: Ha Noi Radcom Rcvr Phu Coc 3
4. DATE OF INFORMATION: 10 January 1968 4
DATE OF IIS: 11 March 1968 5
DATE OF PHOTOGRAPHY: 18 October 1967 6
DATE OF INTELLIGENCE REVIEW: 10 January 1968 7
5. LOCATION: 20-51-36N 105-53-26E 8
6. DESCRIPTION: A large HF radiocommunication station located about 10 9
NM SSE of downtown Ha Noi. Facility consists of a secured administration/control 10
area (A) containing a large U-shaped operations building, two large buildings and 11
four small buildings. An antenna field (B) surrounds the administration/control 12
area (A) and includes 6 fishbone, 6 horizontal dipole, and 8 vee antennas. A 13
separate secured support area (C) contains 4 barracks, an auditorium, a mess- 14
hall, 8 support buildings, and 5 small buildings. 15
7. SIGNIFICANCE: This installation is believed to serve primarily as a 16
direction-finding (DF) receiving control station, based on antenna types installed 17
and their orientation. This facility probably receives DF data from various out- 18
stations monitoring allied electromagnetic radiation signals, and could also be used 19
as a communication terminal on other military networks. 20
8. TARGET ENVIRONMENT: Target, about 15 feet above sea level, is 9 21
NM south of Ha Noi, on the flat plain of the Red River delta. The plain is inten- 22
sively cultivated in wetland rice and contains many small, compact villages; 23
several villages located within one NM of target. The largest relief features on 24
the plain are levees 20-30 feet high bordering the Red River, which flows SSE 25
about 2 NM east of target. An E-W highway on north side of target connects road 26
along river levee with a principal N-S highway, one NM west of target, highway west 27
of target adjacent to N-S railroad. 28
9. DEFENSE ENVIRONMENT: 29
 - a. The target is within the SAM envelope. 30
 - b. AAA activity has been identified within 3 NM of the target. 31
 - c. HMG and small arms fire is anticipated. 32
10. DAMAGE OBJECTIVE: Destruction of operations buildings and antenna 33
arrays. Damage level is 70%. 34

~~SECRET~~ NO FOREIGN DISSEM EXCLUDED FROM AUTOMATIC DOWNGRADING

A-C-BWa-2

Tab BWa to
Annex C to
Appendix A

(Revised by 13th Note to Holders)

661

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11. EFFECT ON NVN: Effect cannot be precisely determined because of lack of non-photo intelligence reporting on station. If installation is, in fact, DF receiver control station, its destruction would mean a serious loss to NVN of intelligence data on allied operations derived from electromagnetic radiation signals such as would be received from radiocommunication and radar transmissions. If used solely as a radiocommunication receiving station, destruction would have an adverse effect on military administrative and control communications, and cause some overloading of Ha Noi area circuits that would have to handle additional traffic normally routed through Phu Coc.

12. RECUPERABILITY:

- a. Destruction of operational buildings expected to result in almost total loss of capability. Resultant shock damage would render installed equipment beyond recovery.
- b. Temporary building repairs could be accomplished in 1 to 2 weeks, permanent reconstruction would probably require 1 to 2 months.
- c. Replacement of electronic equipment, highly dependent on outside availability, technical competence, and transportation factors, is expected to require 4 weeks.
- d. Temporary antennas could be erected in a relatively short time span. 30 days would appear an acceptable period.

13. COLLATERAL DAMAGE:

a. None.

b. Population

Casualties

Target Area		Adjacent Area		Target Area		Adjacent Area	
Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ
40	0	500	10	3	0	5	0

Casualties estimated under daylight alert conditions.

14. RECOMMENDED WEAPONS AND SORTIES:

This telecommunication site is comprised of three areas. Two areas have been delineated for weapons application. Weapons and sorties have been computed for each area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target are also shown.

- (1) In order to achieve a damage level of 30%, weapons/sorties required over target:

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#66.1

A-C-BW-3

Tab BWa to
Annex C to
Appendix A

(Revised by 13th Note to Holders)

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Weapon	250# <u>SNAKEYE</u> or	250# <u>BOMB</u> or	500# <u>BOMB</u> or	750# <u>BOMB</u>	
Area A-1 (400x500)	80/7	113/9	67/8	46/8	1
Area C (500x600)	69/6	91/8	47/5	28/5	2
Totals	149/13	204/17	114/13	74/13	3

(2) Weapons/sorties operationally required to achieve "over target" requirements shown above: 4
5

182/16 249/21 139/16 90/15 6

(3) In order to achieve a damage level of 70%, weapons/sorties required over target: 7
8

Weapon	250# <u>SNAKEYE</u> or	250# <u>BOMB</u> or	500# <u>BOMB</u> or	750# <u>BOMB</u>	
Area A-1	270/23	382/32	227/25	156/26	9
Area C	233/19	307/26	158/18	95/16	10
Totals	503/42	689/58	385/43	251/42	11

(4) Weapons/sorties operationally required to achieve "over target" requirements shown above: 12
13

613/52 840/70 470/53 306/51 14

15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50% 15

~~SECRET~~

#66.1

A-C-BWa-4

Tab BWa to
Annex C to
Appendix A

(Revised by 13th Note to Holders)

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~~SECRET~~

FAB BX TO ANNEX C TO APPENDIX A

TARGET NO. 67

SECRET



~~SECRET~~

Classified by: 1506 N/TH

A-C-BN-1

FAB BX To
Annex C To Appendix A

664

~~SECRET~~

TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 67 1
2. BE NUMBER: 616-0165 2
3. IDENTIFICATION: Ha Noi Intl Radcom Rcvr Son Dong 3
4. DATE OF INFORMATION: 10 January 1968 4
DATE OF TIS: 12 March 1968 5
DATE OF PHOTOGRAPHY: 28 October 1967 6
DATE OF INTELLIGENCE REVIEW: 10 January 1968 7
5. LOCATION: 21-02-57N 105-41-30E 8
6. DESCRIPTION: A radio communication receiving facility located 8.6 NM 9
WNW of Ha Noi. Facility is within a fenced area and contains a single-story 10
masonry type administrative and control operations building (A-2), a possible 11
electrical power substation (A-1), 2 guard towers, and approximately 17 barracks 12
and support buildings (A-3). Antenna field (Area C) has 3 large and 3 small 13
double rhombic antennas arranged in pairs for day/night operations, 2 other 14
double rhombics, 7 single rhombics, and 6 horizontal dipoles. Target area is 15
approximately 800 feet by 600 feet and is served by a secondary road. 16
7. SIGNIFICANCE: This facility is the largest and best equipped radio 17
receiving station in NVN and like the transmitter station at Dai Mo, is also 18
believed to be jointly used by civil and Ministry of National Defense departments 19
of the government. The Ministry of National Defense could use this facility for 20
long haul administrative and command type communications from South Vietnam 21
and Laos as well as in-country. In addition, the Ministry of National Defense 22
could utilize this station for military coordination matters with Communist China 23
and the USSR. In the civilian capacity it could be used for the reception of diplo- 24
matic, press and weather messages. 25
8. TARGET ENVIRONMENT: Target is about 20 feet above sea level, 26
located 10 NM west of Ha Noi, on flood plain intensively cultivated to wetland 27
rice. Plain dotted with village clusters, many trees in villages. Few small 28
lakes, and crossed by small canals; large N-S oriented Red River cuts through 29
plain. Principal roads near site are, a N-S oriented road 0.9 NM west, a NW- 30
SE oriented road 2.1 NM north to Ha Noi, intersected by a N-S oriented road 31
3 NM east. About 20 to 25 NM north and west of target, plain bordered by 32
wooded hills and mountains. 33
9. DEFENSE ENVIRONMENT: 34
 - a. The target is within the SAM envelope. 35
 - b. AAA activity has been identified within 3 NM of the target. 36
 - c. HMG and small arms fire is anticipated. 37

~~SECRET~~ NO FOREIGN DISSEM EXCLUDED FROM AUTOMATIC DOWNGRADING

A-C-BX-2

Tab BX to
Annex C to
Appendix A

(Revised by 13th Note to Holders)

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10. DAMAGE OBJECTIVE: Destruction of antenna towers and operations buildings. Damage level is 70 percent.

11. EFFECT ON NVN: Destruction of this radio receiving facility would disrupt the NVN diplomatic, international press, weather, and high level military traffic. This would overload other radio receiving facilities in the Ha Noi area and impede military coordination.

12. RECUPERABILITY:

a. A large air strike on this radio facility would cause approximately 90 to 95 percent damage to electronic equipment, with very little possibility for salvage.

b. Repair of buildings and replacement of equipment could be accomplished in about 3 to 6 weeks.

c. Electronic equipment and antenna fields could be rebuilt or replaced in 2 to 4 months, depending upon source and technical assistance.

13. COLLATERAL DAMAGE:

a. None

b. Population

Casualties*

Target Area		Adjacent Area		Target Area		Adjacent Area	
Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ
50	15	0	10	3	1	0	0

* Casualties estimated under daylight alert conditions.

14. RECOMMENDED WEAPONS AND SORTIES:

a. In order to achieve a damage level of 30%, weapons/sorties required over target:

Weapon	250# BOMB	or	500# BOMB	or	750# BOMB	or	1000# BOMB
(400x600)	80/7		41/5		24/4		21/7

b. Weapons/sorties operationally required to achieve "over target" requirements shown above:

98/9	50/6	29/5	26/9
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A-C-BX-3

Tab BX to
Annex C to
Appendix A

(Revised by 13th Note to Holders)

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c. In order to achieve a damage level of 70%, weapons/sorties required over target: 1
2

Weapon	250# BOMB or	500# BOMB or	750# BOMB or	1000# BOMB	
	270/23	138/16	81/14	71/24	3

d. Weapons/sorties operationally required to achieve "over target" requirements shown above: 4
5

329/28	168/19	99/17	67/29	6
--------	--------	-------	-------	---

15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50% 7

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A-C-BX-4

#67

Tab BX to
Annex C to
Appendix A

(Revised by 13th Note to Holders)

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~~TOP SECRET~~

TAB CS TO ANNEX C TO APPENDIX A

TARGET NO. 67.3



~~TOP SECRET~~

A-C-CS-1

Tab CS to Annex C
to Appendix A

~~TOP SECRET~~

TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 67.3 1
2. BE NUMBER: 617-0647 2
3. IDENTIFICATION: Chanh Hoa Military Radio Communication Station 3
4
4. DATE OF INFORMATION: 5 January 1965 DATE OF TIS: 5
17 March 1965 6
5. LOCATION: 17-31-50N/106-34-40E, UTM XE 674388 7
6. DESCRIPTION: A radio communication facility serving 8
the Chanh Hoa military reservation about 4 NM NW of Dong Hoi. 9
Main installation is within a fenced area and consists of a 10
communication building, transmitter building and four guyed 11
lattice-type towers north of the operation building. SE of 12
this facility is a probable transmitter site with one rhombic 13
antenna array. A cable system connects the two installations. 14
Two possible direction-finding facilities are located nearby. 15
A primary road serves both installations. 16
7. SIGNIFICANCE: This installation is assumed to provide 17
radio communications for the 325th Division and links division 18
headquarters with the IV Military Region in Vinh and with PAVN 19
Headquarters in Hanoi. In addition, this facility may also 20
serve as the communication link between the 325th and its 21
Viet Cong elements operating in South Vietnam and Laos. 22
8. TARGET ENVIRONMENT: Target is about 50 ft. above sea 23
level, 1.4 miles S. of N.-S.E. trending coastline. Area of 24
sand dunes, 0.5 to 1.0 miles wide, borders coast except along 25
SW side of Song Dinh. Flat wetland ricefields, which enclose 26
target, border SW bank of Song Dinh and back the dunes area, 27
extending inland 1.7 miles to large area of very low hillocks 28
covered by brushwood and scrub. Small tributary to Song Dinh 29
flows NNE 400 yds. E of target; coastal road and abandoned 30
railway, oriented NW-SE, located 0.7 miles SW of target. 31
Target is about 2,100 yds. behind SE part of NIS major beach 32
44. Sand beach with scattered gravel and immediately backed 33
by dunes. Tide 3 ft., tropics. Depths in approaches: 6 34
ft. depths 70 to 200 yds. off L.W. line. 18-ft. depths 350 35
to 1,000 yds. off L.W. line, 36-ft. depths 700 to 2,500 yds. 36
off L.W. line. Offshore approach is partly obstructed by 37
shoal with least depth of 26 ft. about 1,800 yds. off SE 38
part of the beach and by drying rock, 1,700 yds. off SE part. 39
Nearshore approach partly obstructed by shifting bars off 40
L.W.L. and flanked by river-mouth bars and shoals. Surf is 41
4 ft. or higher, occurs 26% of the time in November-March, 42
9% in April-September, and 38% in October. Nearshore bottom 43
is sand and mud. 44
9. DEFENSE ENVIRONMENT: 45
 - a. Dong Hoi area AAA defense include 7 active sites, 46
with 29 light (14.5mm-37mm) AAA positions occupied and 47
4 positions unoccupied, plus 10 inactive sites (47 posi- 48
tions unoccupied). 49
 - b. The 501st Coastal Security Battalion has been 50
reported resident in the area, as are the HQ and some 51
operational elements of the 325th Infantry Division. AW 52
positions are scattered throughout the various troop areas. 53

~~TOP SECRET~~

A-C-CS-2

Tab CS to
Annex C to
Appendix A

669

~~TOP SECRET~~

c. KNIFEREST-B and SCR-270 early warning radars are located at 17-30-00N/106-36-00E (XE 699354).

10. DAMAGE OBJECTIVE: Destruction of the lattice-type towers, communication and transmitter buildings and transmitter site.

11. EFFECT ON NVN: Destruction of this radio facility would disrupt command radio communications between the 325th Division Headquarters in Dong Hoi, the IV Military Region Headquarters in Vinh, and when required with Viet Cong elements in South Vietnam and Laos. The extending open-wire lines would not be capable of handling the additional traffic, nor could the low level, tactical radio facilities.

12. RECUPERABILITY:

a. Destruction of buildings housing the radio facilities would cause about 75% destruction to the electronic equipment, with very little remaining salvagable.

b. It is believed mobile, hut-mounted radio facilities could be moved into the area and assume communications control. Repair of buildings could be accomplished in 3-10 days.

c. Electronic equipment and antenna replacement would be from 3-15 days, depending on source, transportation, technicians, etc.

13. COLLATERAL DAMAGE: Insignificant.

14. RECOMMENDED WEAPONS AND SORTIES:

a. In order to achieve a damage level of 30%, weapons/sorties required over target:

Weapon:	250# SNAKEYE	or	250# BOMB	or	500# BOMB	or	750# BOMB
	9/1		38/3		19/2		11/2

b. Weapons/sorties operationally required to achieve "over target" requirements shown above:

11/1	46/4	23/3	13/2
------	------	------	------

c. In order to achieve a damage level of 70%, weapons/sorties required over target:

31/3	128/11	64/7	37/6
------	--------	------	------

d. Weapons/sorties operationally required to achieve "over target" requirements shown above:

38/3	156/13	78/10	45/8
------	--------	-------	------

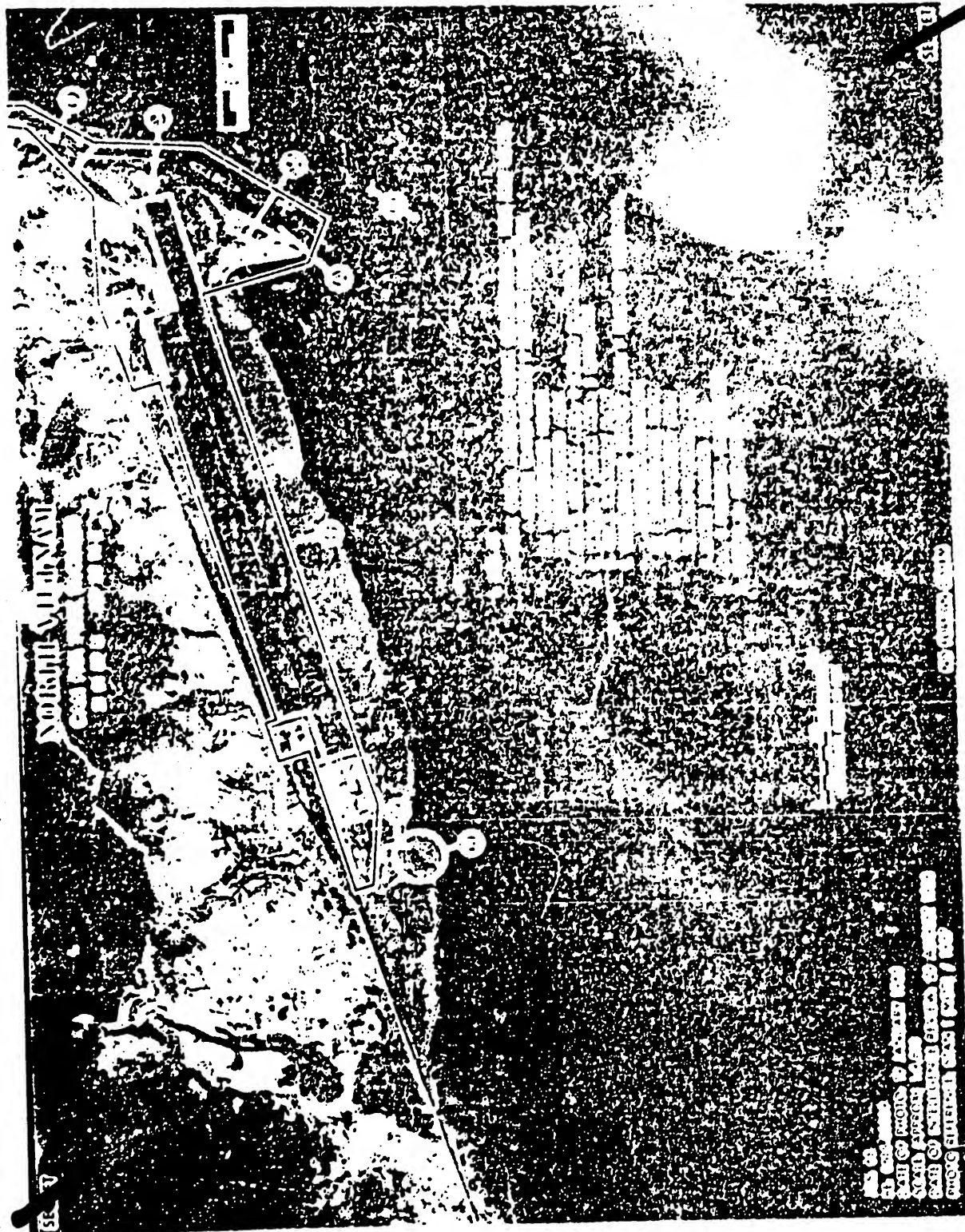
15. PROBABILITY OF ACHIEVING DAMAGE CRITERION: 50%

~~TOP SECRET~~

A-C-CS-3

Tab CS to
Annex C to
Appendix A

(Revised by 7th Note to Holders)



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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 68 1
2. BE NUMBER: 615-0009 2
3. IDENTIFICATION: Cam Pha Port Facilities 3
4. DATE OF INFORMATION: 8 June 1968 4
DATE OF TISD: 13 November 1968 5
DATE OF PHOTOGRAPHY: 19 January 1965 6
DATE OF INTELLIGENCE REVIEW: 28 August 1968 7
5. LOCATION: 21-01-00N 107-02-14E, a maritime port located on the Gulf of Tonkin. 8
6. DESCRIPTION: Cam Pha is the principal coal export facility in NVN. Key elements of the port are: (A) 1,000 ft. coal quay of masonry block construction with 4 bridge transporters and 9 support buildings; (A1) transformer house; (B) coal storage area with 5 bridge transporters; (C) railroad repair shop area with 8 buildings; (D) coal-treatment plant; (E) storage/support area with 7 probable storage buildings and 10 support buildings; (E1) revetted POL tank; (F) barge loading area. 10
7. SIGNIFICANCE: Cam Pha port is designed primarily to handle the export of coal from nearby mines. A lack of covered storage and the port's remote location from the Hai Phong/Ha Noi complex inhibit its usefulness as a general cargo port and receipts are consequently small. However, Cam Pha could receive an estimated 1,300 short tons of general military cargo per 24-hour working day (16% national maritime cargo handling capacity). The port can accommodate deeper draft vessels than the other principal NVN coal export point, Hon Gai, and thus represents a key installation in the NVN coal export industry, their main source of foreign currency. Also Cam Pha is NVN's closest maritime port to Communist China and therefore a potential surreptitious receiving point for Southbound CHICOM aid. 19
8. TARGET ENVIRONMENT: Target at sea level, 4.3 NM E of Cam Pha Mines, on the irregular coast of the Gulf of Tonkin. Cultivated hillocks and flat areas containing stockpiles of coal extend along coast in vicinity of target and reach about 0.3 NM inland to the base of wooded hills. The hills extend westward and attain an elevation of 1,560 ft. above sea level within 3 NM of the target. The southern tip of the large, hilly, triangular Ke Bao Island is 1.0 NM NE of target, and a small, brush-covered island, 320 ft. above sea level, is located 0.7 NM N of target. The target is served by a coastal road and rail line to local mines. 33
9. DEFENSE ENVIRONMENT: 34
a. The target is not within the SAM envelope. 35
b. AAA activity has been identified within 3 NM of the target. 36
c. IIMG and small arms fire is not anticipated. 37

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10. DAMAGE OBJECTIVE: To deny use of port facilities through destruction by air strikes. Damage level is 30% with structural damage to buildings, bridge transporters, and stored POL in target areas plus associated damage to quay, mechanical handling facilities, rails, rolling stock and goods in storage. Destruction of bridge transporters in Area B is critical to interdiction of coal loading.

11. EFFECT ON NVN: Major reduction in capability to export coal with consequent loss of foreign exchange credits.

12. RECUPERABILITY: Restoration of damaged wharfage could probably be accomplished in less than two weeks, utilizing temporary construction techniques. Rehabilitation of additional damage to buildings, mechanical handling facilities, rolling stock, and coal processing equipment could extend to six months since repair of antiquated French equipment would probably require special manufacture of replacement parts.

13. COLLATERAL DAMAGE:

a. Light damage to surrounding area.

b. Population Casualties*

Target Area		Adjacent Area		Target Area		Adjacent Area	
Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ
0	430	0	1850	0	26	0	19

*Casualties estimated under daylight alert conditions.

14. RECOMMENDED WEAPONS AND SORTIES:

This target complex is comprised of 6 areas. Four areas (with 5 sub-areas) have been delineated for weapons application. Weapons and sorties have been computed for each area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target are also shown:

(1) In order to achieve a damage level of 30%, weapons/sorties required over target:

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WEAPON	250# SNAKEYE	500# SNAKEYE	500# BOMB	750# BOMB	
Area A (155'x60')	9/1	5/1	18/2	10/2	3
Area A-2 (415'x115')	17/1	9/1	24/3	14/2	4
Area C (415'x250')	38/3	16/2	28/3	14/2	5
Area D (230'x190')	62/5	33/4	72/8	52/9	6
Area E-1 (36'- D1a)	9/1	7/1	29/3	25/4	7
Area E-2 (655'x255')	57/3	19/2	35/4	21/4	8
Area E-3 (185'x45')	9/1	5/1	18/2	11/2	9
Total	181/15	92/12	224/25	147/25	10

(2) Weapons/sorties operationally required to achieve "over target" requirements shown above:

218/18 113/13 269/50 177/30

(3) In order to achieve a damage level of 70%, weapons/sorties required over target:

WEAPON	250# SNAKEYE	500# SNAKEYE	500# BOMB	750# BOMB	
A-1	30/3	16/2	58/6	34/6	18
A-2	56/5	29/3	80/4	47/8	19
C	128/11	51/6	93/10	45/8	20
D	208/17	102/12	241/27	173/29	21
E-1	28/2	22/2	96/11	83/14	22
E-2	123/10	63/7	118/13	70/12	23
E-3	29/2	15/2	59/7	35/6	24
Total	602/50	305/34	745/86	487/83	25

(4) Weapons/sorties operationally required to achieve "over target" requirements shown above:

723/60 366/41 894/99 585/98

15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%

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#68

(Revised by 15th Note to Holders)
A-C-CZ-4

TAB CZ to
Annex C to
Appendix A

624

~~TOP SECRET~~

(4) Weapons/sorties operationally required to achieve
"over target" requirement shown above:

WEAPON:	<u>500#</u> <u>BOMB</u>	or	<u>750#</u> <u>BOMB</u>	or	<u>1000#</u> <u>BOMB</u>	or	<u>250#</u> <u>SNAKEYE</u>
	959/107		591/99		502/167		384/32
							Plus 227/38
							750# Bombs
							on Area A

15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 57%

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A-C-CZ-5

Tab CZ to
Annex C to
Appendix A

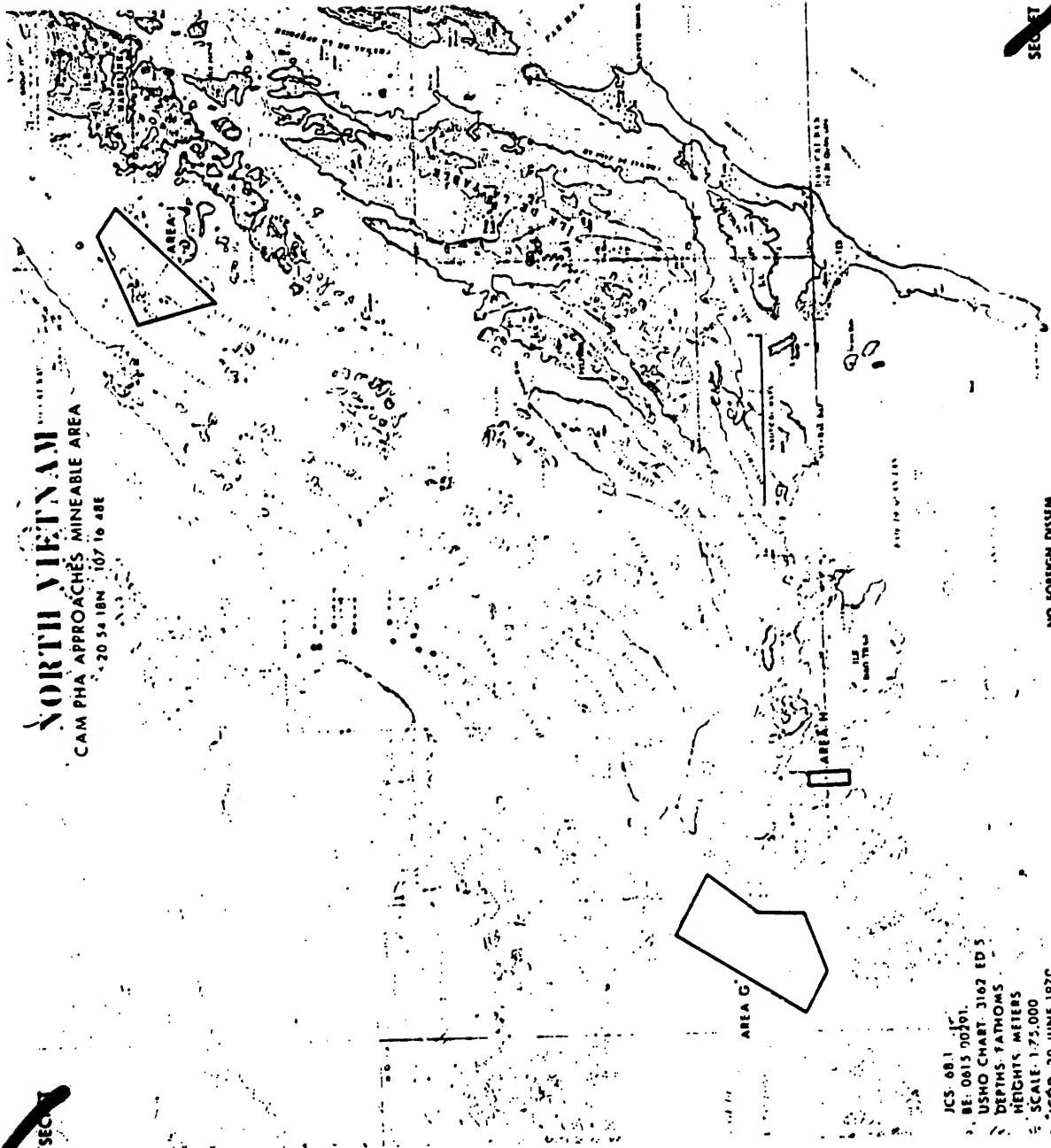
(Revised by 7th Note to Holders)

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TAB C2a TO ANNEX C TO APPENDIX A
TARGET NO. 62.1

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Revised by 1741 N 411

A-C-C2a-1

Tab C2a to Annex C
to Appendix A

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 68.1 1
2. B.E. NUMBER: 615-0291 2
3. IDENTIFICATION: Cam Pha Approaches/Mineable Area 3
4. DATE OF INFORMATION: 22 February 1971 4
DATE OF TISD: 23 February 1971 5
DATE OF PHOTOGRAPHY: Not Applicable 6
DATE OF INTELLIGENCE REVIEW: 22 February 1971 7
5. LOCATION: 20-54-18N 107-16-48N (Approximate center of Area 8
Golf), 9 NM SW of the maritime port of Cam Pha. 9
6. DESCRIPTION: The approaches consist of 3 mineable areas, 2 10
of which control deepwater access to Cam Pha. 11
 - a. Area Golf, (2.5 NM x 1.3 NM), lies at the intersection of 12
Chenal De La Saone, Passe De L'aspic, and Passe Due Casque, N and W 13
of Ile des Biches. Depths range from 24' to 72'. 14
 - b. Area Hotel (0.5 NM x 0.2 NM) lies in Passe De La Mouche, E 15
of the southern tip of Ile Kieu. Depths range from 36' to 90'. 16
 - c. Area India (2.4 NM x 1.0 NM) about 7 NM northeast of Cam Pha 17
Port lies in the Chenal Du Lynn, chenai on Duchaffunt, W of Ile Madeline. 18
Depths range from 4' to 36'. 19
 - d. Tide rises 3.3' above datum at MLLW to 10.5' above datum 20
at MHHW, with currents of about 3 kts. Bottom is generally mud and 21
sand. 22
7. SIGNIFICANCE: In 1970 Cam Pha handled 83% of NVN coal exports, 23
the main source of NVN foreign currency, and is the NVN port nearest 24
to Communist China. Mining of the approaches would restrict deepwater 25
access to the port. 26
8. TARGET ENVIRONMENT: Three areas located among steep-sloped 27
barst islands. Areas Golf oriented NE-SW about 7-10 NM SW of Cam Pha. 28
Areas located SE of Ile due Milieu (max. elev. 231') and to NW of Ile 29
du Milieu (max. elev. 323'). Area Hotel located in channel between 30
Ile Kieu (max. elev. 557') on the W and Ile Dao Trao (max. elev. 751') 31
on the E; approximately 8.5 NM S of Cam Pha. Area India located in 32
chenal Du Lynn, between the shore (max. elev 1260') on W and Ile Madeline 33
(max. elev. 919') on W; 7 NM NE of Cam Pha Port. 34
9. DEFENSE ENVIRONMENT: 35
 - a. The target is not within the SAM envelope. 36
 - b. AAA activity has been identified within 3 NM of the target. 37
 - c. HMG and small arms fire is not anticipated. 38

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A-C-CZA-2
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10. DAMAGE OBJECTIVE: Interdict NVN coastal cargo vessels and naval craft; deny use of Cam Pha port facilities.

11. EFFECT ON NVN: Reduction of coal export capability and consequent loss of foreign currency.

12. RECUPERABILITY: At present the NVN has only a very limited minesweep capability.

13. COLLATERAL DAMAGE: Possible damage to fishing craft transiting area.

14. RECOMMENDED WEAPONS (MINEABLE AREAS):

MK 52

23

MK 55

14

15. PROBABILITY OF MODERATE DAMAGE TO A SINGLE SHIP TRANSITING THE MINEFIELD AREA (ALL FIELDS COMBINED): 30%

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A-C-CZa-3
(Revised by 17th Note to Holders)

Tab CZa to
Annex C to
Appendix A

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TAB DA TO ANNEX C TO APPENDIX A

TARGET NO. 59



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(Revised by 14th N/H)

A-C-DA-1

Tab DA To Annex C
To Appendix A

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TARGET INFORMATION AND STRIKE DATA

1. TARGET NUMBER: 69 1
2. BE NUMBER: 615-0008 2
615-0148 3
3. IDENTIFICATION: Hon Gai Bai Chay Port and Naval Complex 4
4. DATE OF INFORMATION: 29 March 1968 5
DATE OF TIS: 14 May 1968 6
DATE OF PHOTOGRAPHY: 31 July 1966 7
DATE OF INTELLIGENCE REVIEW: 3 April 1968 8
5. LOCATION: 20-57-12N 107-04-00E (Reference point only -
not an individual B.E. coordinate) 9
10
6. DESCRIPTION: This complex is comprised of two sections 11
divided by Cua Luc - the commercial port area on the east and the 12
naval base on the west. 13
- a. Facilities contained in the port area are (A) the port 14
authority HQ; (B) 2 masonry quays with a total berthing length 15
of 500 ft., and one offshore wharf 270 ft. long, all with 16
alongside depths of 19 ft. On the inner face of the offshore 17
wharf, 210 ft. of berthing space available for barges, with 18
alongside depths of 13 ft.; (C) a 1,325 ft. masonry seawall 19
fronted by drying beach, access by small boats only; and (D) 20
a warehouse area containing 7 warehouses with a total floor 21
space of approximately 65,000 sq. ft., several acres of open- 22
stacking space, a 70-ft. wood deck pier with open wood pilings. 23
Four cranes are located on the wharves and a half-acre coal 24
storage area is located to the rear and east of the wharves. 25
A coal processing plant is located between the warehouses and 26
the coal storage area. Rail lines clear these wharves and 27
pier approaches to adjacent industrial and mining areas only. 28
The buildings are mostly one story with concrete walls and 29
wooden roofs. 30
- b. The naval base (E) contains an offshore wharf 330 ft. 31
long constructed of wooden decking on metal-braced wood piles 32
with an estimated 7 ft. depth alongside, two multi-story 33
barracks, a T-shaped administration building, four probable 34
storage buildings, a ship repair area with a transversing 35
marine railway, a T-head pier and support shops. Under 36
construction north of the pier are probable additional 37
barracks and storage buildings. 38
- c. The railroad maintenance and repair shops area (F) 39
contains five buildings with concrete walls and corrugated 40
sheet steel roofs. The shops are used for repair of rail- 41
road rolling stock and mining equipment. 42

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A-C-DA-2
(REVISED BY 14TH NOTE TO HOLDERS)

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7. SIGNIFICANCE: Hon Gai port is primarily a coal export point; it handles about 5% of the total NVN international maritime trade. It is also an important loading site for coal distributed by coastal barge to other parts of North Vietnam. Hon Gai Naval Base and Ship Repair Yard Bai Chay is headquarters of the Northern Fleet. Its marine railway is capable of drydocking P-4, Shanghai and Swatow class naval craft. Estimated military port capacity of the complex is 1,450 long tons per effective 20-hour working day, 250 tons of which would be unloaded at the naval base. Usefulness of this port as an alternate to Hai Phong is limited by its lack of rail clearance to the Hai Phong/Ha Noi industrial complex.

8. TARGET ENVIRONMENT: The target area, near sea level, is immediately west of Hon Gai. It occupies the tips of two peninsulas which converge seaward, enclosing fan-shaped Port Courbet (Hon Gai Bay). The peninsula tips are separated by the 0.3 NM-wide entrance to the bay; the bay extends 2.5 NM north from the entrance to mangrove swamps backed by hills and mountains. The peninsulas are hilly, with tops 300 to 600 feet above sea level. Land within one NM of target is mostly cultivated in wetland rice; hills further from target are wooded.

9. DEFENSE ENVIRONMENT:

- a. The target is within the SAM envelope.
- b. AAA activity has been identified within 3 NM of the target.
- c. HMG and small arms fire is anticipated.

10. DAMAGE OBJECTIVE: To deny use of port and naval facilities to NVN through destruction by aerial bombing. Damage level is 30% with structural damage to buildings, cranes, rolling stock and wharfage plus accompanying damage to goods in storage and naval vessels in port.

11. EFFECT ON NVN: Reduction in capability to export coal, a consequent loss of foreign exchange earnings, disruption of the NVN internal coal distribution system, and a loss of naval support capability in the northern fleet area.

12. RECUPERABILITY:

Damage assessment:	3 days	
Debris clearance and procurement of lumber:	5 days	
Repair of buildings:	4 days	
Repair of wharves, and rail clearance:	<u>6 days</u>	
Total:	18 days	

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A-C-DA-3
(REVISED BY 14TH NOTE TO HOLDERS)

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13. COLLATERAL DAMAGE:

a. Light damage to surrounding area.

b.

Population				Casualties*			
Target Area		Adjacent Area		Target Area		Adjacent Area	
Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ
200	1030	0	2670	12	62	0	27

* Casualties estimated under daylight alert conditions

14. RECOMMENDED WEAPONS AND SORTIES:

This combined facility is comprised of six areas. Four of the areas have been delineated for weapons application. Weapons and sorties have been computed for each area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target are also shown:

(1) In order to achieve a damage level of 30%, weapons/sorties required over target:

WEAPON	500# <u>SNAKEYE</u>	750# <u>BOMB</u>
Area B (300 x 950)	42/5	52/9
Area D (450 x 800)	41/5	27/4
Area E (250 x 1450)	40/4	41/7
Area F (250 x 650)	56/6	45/7
Total	179/20	165/27

(2) Weapons/Sorties operationally required to achieve "over target" requirements shown above

215/24 198/33

(3) In order to achieve a damage level of 70%, weapons/sorties required over target:

WEAPON	500# <u>SNAKEYE</u>	750# <u>BOMB</u>
Area B	142/16	175/29
Area D	138/15	91/15
Area E	135/15	138/23
Area F	189/21	152/25
Total	604/67	556/92

(4) Weapons/sorties operationally required to achieve "over target" requirements shown above:

724/80 666/111

15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%

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A-C-DA-4
(REVISED BY 14TH NOTE TO HOLDERS)

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Appendix A

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12. RECUPERABILITY: Destruction of the transformer station would require a period of from six to nine months for restoration. Destruction of the power plant structures, generator, and boilers would require about one year for partial resumption of operation on an emergency basis by utilization of salvaged and repaired equipment. Reconstruction of the plant to full present capacity could be accomplished in about 18 months using equipment probably currently on order.

13. COLLATERAL DAMAGE:

a. Insignificant

Population				Casualties*			
Target Area		Adjacent Area		Target Area		Adjacent Area	
Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ
0	185	0	900	0	11	0	9

*Casualties estimated under daylight alert conditions.

14. RECOMMENDED WEAPONS AND SORTIES:

This installation is comprised of seven areas, three of which have been delineated for weapons application. Weapons and sorties have been computed for this area. To show the effort required to achieve the damage level prescribed, total weapons/sorties required over the target are also shown:

(1) In order to achieve a damage level of 70%, weapons/sorties required over target:

WEAPON	500 #	750 #
	SNAKEYE	BOMB
Areas A,B,C, (155' x 265')	5/1	13/2
(2) Weapons/sorties operationally required to achieve "over target" requirements shown above:		
Totals:	6/1	16/3

15. PROBABILITY OF ACHIEVING DESIRED DAMAGE LEVEL: 50%

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A-D-Y-3

(Revised by 17th Note to Holders)

Tab Y to
Annex D to
Appendix A

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